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# PAPER TRADE JOURNAL

With Which Is Combined

Vol. XCI, No. 21 — Thursday, November 20, 1930

# $1,000,000 Development at Champion Mills

## Champion Coated Paper Co. Will Equip Its Entire Plant at Hamilton, Ohio, with Recently Invented Roller Coating Machines—Alexander Thomson Announces that the Company Has Kept Its Force of 2,800 Men Practically Intact, Working a Six Day Week and 24 Hours Per Day—Morale of Working Force Consistently Kept Up

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, November 17, 1930—The Champion Coated Paper Company of Hamilton is preparing to equip its entire plant with recently-invented roller coating machines at a cost of more than $1,000,000, replacing the old system of coating paper by the use of brushes.

The announcement came as a pleasing surprise to the community in which the company has played a notable part in helping employment conditions by maintaining a full force, working six days a week. Few concerns in any industry have so consistently kept up morale of the working force as the Champion.

Alexander Thomson announced the million dollar plant development plans at a forum conducted by the Chamber of Commerce in Cincinnati the past week.

For many years the Champion Coated Paper Company has used the old standard system of coating paper by the use of brushes. Recently the company's engineers developed a roller coating machine and this has been found so efficient an equipment that the entire plant will be changed.

Mr. Thompson said the company has twenty-eight of the brush coating machines. "The new roller coating machine puts a smooth layer of coating on paper by means of a roller," explained Mr. Thomson. "This invention has worked out so well that our company has decided to replace all twenty-eight brush coating machines with 28 new roll coating machines."

Mr. Thomson further stated at the meeting that the Champion Coated Paper Company in the present national emergency of unemployment "has done its bit to help conditions by maintaining a full force and working a six-day week and 24 hours a day." He further said that "we employ 2,800 men and have let off less than one per cent of our force."

Another feature brought out in Mr. Thomson's talk was the fact that at Canton, North Carolina, where vast numbers of old mountain forest trees are turned into paper fibre, where the company operates the Champion Fibre Company's plant, efforts are being made in saving the new growth of trees in the forest, and in the work of reforestation.

Mr. Thomson displayed pictures of the large tree nursery maintained by the company where 6,000,000 little trees are being cultivated. Each year the company plants from 500,000 to 2,000,000 trees, he said, in the mountain region, in the future these trees will be of commercial value.

He also told how the company's 156,000 acres of forest land in the Great Smoky Mountains in North Carolina and Tennessee are being made into a national park, the Rockefellers having aided the state of Tennessee in financing its part of the project.

"The process of condemning our acreage is now going on," Mr. Thomson stated. "The making of a national park out of this region has forced us to secure new land for spruce and we have leased, bought or otherwise acquired control of 90,000 acres in this region."

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### Conditions Good in Paper Mills

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., November 17, 1930.—Industrial conditions are regarded as unusually good in a number of paper mills in this city. Nearly 900 employees are being employed on full time at the plant of the A. P. W. Paper Company where it was said sales were running 3 per cent ahead of last year. The company is rated as one of the city's steadiest industries and like other firms in this vicinity it apparently has not suffered from the depression supposed to be affecting business. It was announced that business during September and October had run far ahead of last year and above any production records heretofore established by the concern. The enormous volume of business booked necessitated a double shift in many departments during that time and it is only now that the firm has been able to catch up with the demand. During the past year there has been a slight cut in the working force but the plant payroll is greater now than ever before.

The frequent arrival of wood pulp shipments from the Nova Scotia mills is also incidental for the steady employment of about 175 men. These vessels arrive about every two weeks with cargoes averaging about 2,100 tons and this schedule will be carried on until cold weather terminates the navigation season. Last year sixteen vessels loaded with wood pulp from foreign ports were received by the company and this year that number will be greatly exceeded.

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### Swedish Pulp Mills Continue Labor Agreement

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 19, 1930—No notice to discontinue the labor agreement between the Swedish wood pulp manufacturers and their workers has been given by either side according to unofficial reports received here and the present agreement will therefore remain in effect until January 1, 1932.

# Canadian News Print Merger Takes New Turn

## Series of Appraisals Said To Be Under Way Make It Probable, If and When the Merger Is Announced That It Will Be on the Basis of Physical Properties Rather Than on Capital Structure—Additional 20,000 hp. for Second Machine

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., November 17, 1930.—A new turn to the long-talked-of merger of leading news print interests in Canada has been given by the news that a series of appraisals is under way, including cruises of timber limits held by the major companies involved. From this the inference is drawn that the merger if, and when, it is announced, will be on the basis of physical properties rather than on capital structures. This carries with it the further inference that paper-making units may be segregated from the power units of large power and paper corporations in the mooted amalgamation. Corporations such as Canada Power and Paper, and Abitibi Power and Paper, through earlier mergers and the creation of subsidiaries in both the power and paper fields, have built up completed capital structures which would require a good deal of untangling in case of a merger involving only the paper-making mills.

### Dalhousie Paper Mill

The additional 20,000 h.p. which is required for the operation of the second news print machine installed in the Dalhousie mill of the International Paper Company has just been brought in by the St. Johns River Power Company, a subsidiary of International. This gives the power plant a total installed capacity of 80,000 h.p.

The greater part of the company's output is sold to Fraser Companies Ltd., and New Brunswick International Paper Company. Fraser Companies contract, which runs for 40 years from 1928, calls for delivery of 20,000 h.p.

A 104 mile transmission line to the Dalhousie mill of New Brunswick International Paper Company was completed in 1929. Contracts with that company also run for 40 years and call for the entire remaining output of the plant, both of primary and secondary power, up to the present aggregate installed capacity of 80,000 h.p.

### Enlarging Pulpwood Cut

From St. John, N. B., it is announced that in view of the offer of a reduced stumpage rate, the International Paper Company is considering an expansion of its cut of pulpwood in New Brunswick this season. The stumpage rate has been placed at $2.70 per thousand as against $3.50, which previously prevailed.

Apart from the pulpwood cut, present indications are that the manufacture of hardwood ties will be the predominant lumber industry in this province this fall, the C. P. R. having placed orders for 100,000 of these and a similar cut being anticipated for the Canadian National Railways.

### Fibre Board Co. Moves Offices

Due to the increasing number of new insulating products now being manufactured by International Fibre Board, Limited and the resulting need for closer factory supervision, the administrative officers of the company had been moved from Montreal to Gatineau, Que. International Fibre Board, Limited, makers of Ten Test insulating building board, is one of the largest manufacturers of its kind in the British Empire, and exports its products throughout the world.

Direct sales offices, it was announced by Howard Stannard, general manager of the company, will be maintained in Montreal, Hamilton and Toronto, while western distribution will be under the supervision of the T. R. Dunn Lumber Company, Limited, Winnipeg. Both domestic and export sales will be directed by Charles Southgate, general sales manager. Canadian sales will be under the direct supervision of George Willenberg, assistant sales manager for Canada.

### A New Mill in England

Gerald A. Newman, assistant Canadian trade commissioner in Liverpool, writes that a large paper mill is now in process of construction on the Mersey River, and is expected to be in operation early in December. The mill is electrically equipped and capable of output of about 1,000 tons of news print a week; approximately half of this output is contracted for by a well-known English newspaper company, while it is also known that one Manchester newspaper has contracted for a considerable quantity. Formerly this paper obtained its supplies from well-known Lancashire mills. It is anticipated that a second Manchester paper will also be transferring its order to this new source of supply.

### Difficult to Meet Scandinavian Competition

Canadian mills, continues Mr. Newman, find it difficult to meet Scandinavian competition in Great Britain, though the Canadian paper is considered of a higher quality. While definite figures are not obtainable, it is estimated that during this year some 4,000 tons of Canadian news print will come into the port of Liverpool, as compared with an approximate shipment of 100 tons per month from each of the Scandinavian countries. Local distribution of imports is roughly indicated by the consumption figures furnished by two well-known North of England newspapers; one company, with an annual demand of 5,200 tons divided its requirements as follows: Canada, 2,000 tons; Scandinavia (Norwegian, Finnish and Swedish), 1,250 tons; and English mills, 2,000 tons. The other newspaper firm stated that of its yearly consumption of 12,000 tons Canada supplied 3,000 tons the remainder being divided between English and Scandinavian mills.

An interesting note is that the Canadian method of packing rolls of news print in paper proves a better protection than the Swedish method of packing in wooden crates. The reason, apparently is that the apparent vulnerability of the Canadian paper impresses handlers with the necessity of exercising care while the wooden crates being roughly handled, often have both package and contents damaged.

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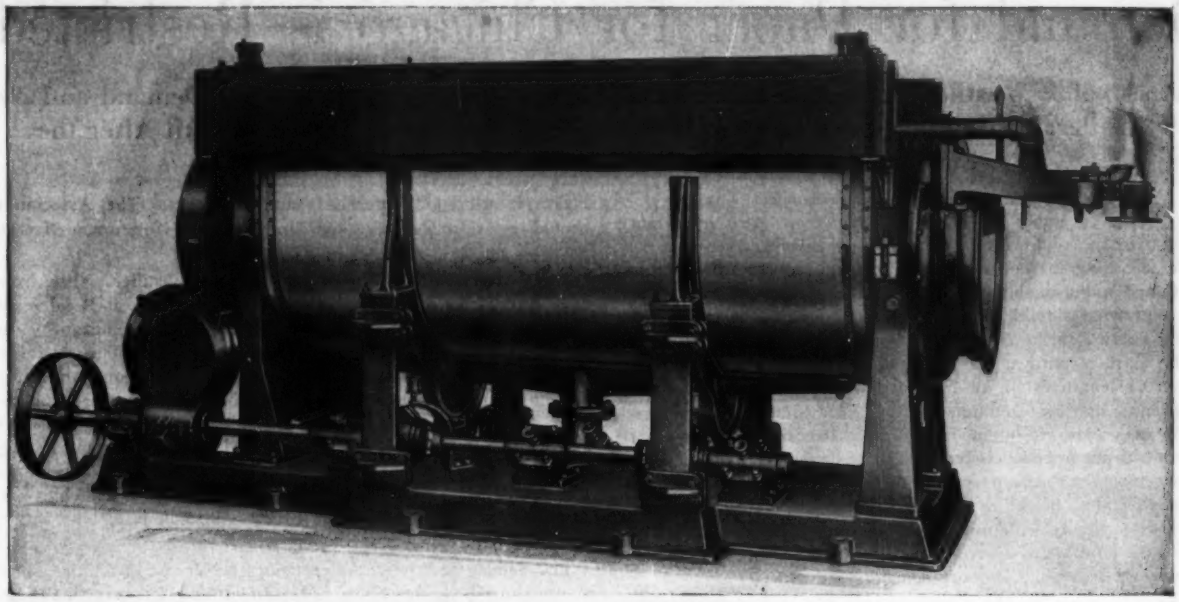
## Building Six Digesters for Weyerhauser

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, Ore., November 15, 1930—Manufacture of six large sulphite digesters for the new pulp mill of the Weyerhauser Timber Company, Longview, Wash., are getting under way at the plant of the Willamette Iron and Steel Works, Portland, with the arrival of 300 tons of steel plates on the Isthmian line steamer *Anniston City* last week, this being the first shipment of 600 tons to be used in the digesters and two acid accumulator tanks, the second shipment being enroute on the steamer *Pomona*.

The digesters are to be 16 feet in diameter by 52 feet high, mounted on structural legs which elevate them above the floor level. The acid tanks are 17 feet in diameter and 50 feet over all height of vessel and are likewise mounted on structural legs. They are built for 75 pounds working pressure.

The Willamette Iron and Steel Works has just finished the field erecting of a riveted digester for the plant of the Crown-Willamette Paper Company at Camas, Wash., which is 19 feet in diameter, 58 feet over-all height and built for 110 pounds working pressure.



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are essential equipment in every mill operated to make high-quality paper at low cost. Let us prove, with actual figures, how Bird Screens can add to profits in your mill.

BIRD MACHINERY

## BIRD MACHINE COMPANY

SOUTH WALPOLE ◆ MASSACHUSETTS

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# Demand for Paper for Chicago is Restricted

## Unseasonable Weather, Among Other Factors, Retards Expansion of Normal Demand and No Considerable Improvement In Any Division of the Market Is Expected Until After the First of the Year—Attractive Advertising by Paper Mills

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, November 17, 1920.—No change of great importance is reported in conditions in the Chicago paper market over last week according to reports from representatives of various lines. Continued unseasonably warm weather has retarded retail sales and kept what should be normal buying down to a rather slow pace. There is little or no definite improvement expected in any of the markets until at least after the first of the year although sales representatives of all lines are working strenuously to insure representative commitments for 1931. Fine papers, in practically all grades, are finding the going a bit easier than the coarse papers with the price levels reported to be better maintained. Some improvement in the kraft situation, largely through concentrated local effort, has helped somewhat. The board market continues to go very slowly with mills working only a part of each week in an earnest effort to overcome a vast amount of over production. Tissues are seasonally in more demand.

### Paper Trade Association to Meet

The stage is all set for one of the most interesting association meetings held in Chicago annually with a big crowd expected to attend the annual banquet and meeting for election of officers of the Chicago Paper Association, to be held at the Bismarck Hotel, Chicago, on Tuesday evening, November 18. Only members of the association and a few guests will be on hand for the dinner and program, both of which are expected to be extremely interesting. Two unusually well known guests will be present at the meeting. The first, E. H. Allen, was, for a time, attorney for the Chicago Paper Association. Mr. Allen has now retired from active legal practice but still retains a very definite interest in the work of the organization. He will be the chief speaker of the evening. Charles E. Duncan, sales manager of the Howland Bag and Paper Company and the Dexter Sulphite Pulp and Paper Company, is another guest well known to the paper trade. Although the informal program does not list him for a speech it is probable that he will eventually be found on the program. The annual report of association activities given by the president, D. F. Peck of the Hanchett Paper Company, will be another highlight of the evening. The organization has done a great deal of constructive work during the past twelve months and a summing up of this effort will be unusually interesting to those present.

### Effective Advertising Matter

A 6 x 9 broadside printed on Warren's Silkfold, White, bearing the interesting title "Don't Let Delays Hold You Back" is the most recent mailing of the Chicago Paper Company featuring the Warren book on "How to Plan Printed Pieces to Save Time and Money", which has been and continues to be an aid to printers and advertisers in planning pieces that cut without waste from four standard sizes carried in stock by the Chicago Paper Company.

Seasonally correct is the most recent issue of "Rags in Paper" the newsy sheet published by the Rag Content Paper Manufacturers Association. A sample letterhead contains the dignified setup of a well known sporting goods store. The cover of the little four page magazine itself features an illustration of a football game—seasonally correct and tieing up with the sample letterhead. The center spread of the folder is unusually effective. It is an illustration of an immense stadium jammed full of onlookers. In the center is the copy under the arresting title of "Touchdown!" And the copy takes up the football theme and makes it sell good letterheads and envelopes. The Association should get a medal of some kind or other for some effective seasonal copy.

"As Correct as the Courtly Flourish of a Cavalier" is the front page title of an interesting folder describing Correct Bond made by the Aetna Paper Company and distributed in Chicago by the Midland Paper Company; Parker, Thomas and Tucker Paper Company and the Moser Paper Company. The front cover also contains an illustration of a swash-buckling cavalier and the copy features the same knightly gentleman in both illustration and word. Correct bond is described as an economical rag-content bond of clean, brilliant White color and crisp appearance and feel. The folder is printed on Correct Bond, White, 24-pound, cockle finish. The paper comes also in buff, blue, russet and gray with envelopes to match.

The latest descriptive advertising folder on Atlantic Bond, manufactured by the Eastern Manufacturing Company and distributed in Chicago by the LaSalle Paper Company is an interesting discussion on the use of illustrated advertisements as splendid material for illustrated sales letters, tieing up with the magazine advertising. The suggestion is furthered by the use of nine full page advertisements and the presence of nine separate illustrated sales letters featuring methods whereby illustrations and ideas from the publication advertisements have been carried into the sales letter. The sales letters are printed on various grades of Atlantic Bond while the big blue and white cover features the magazine advertisements and a discussion on the impressiveness, economy and quality of Atlantic Bond. As usual, in good paper advertising, the entire broadside effectively combines a valuable suggestion with an unobtrusive but effective sales talk for the product.

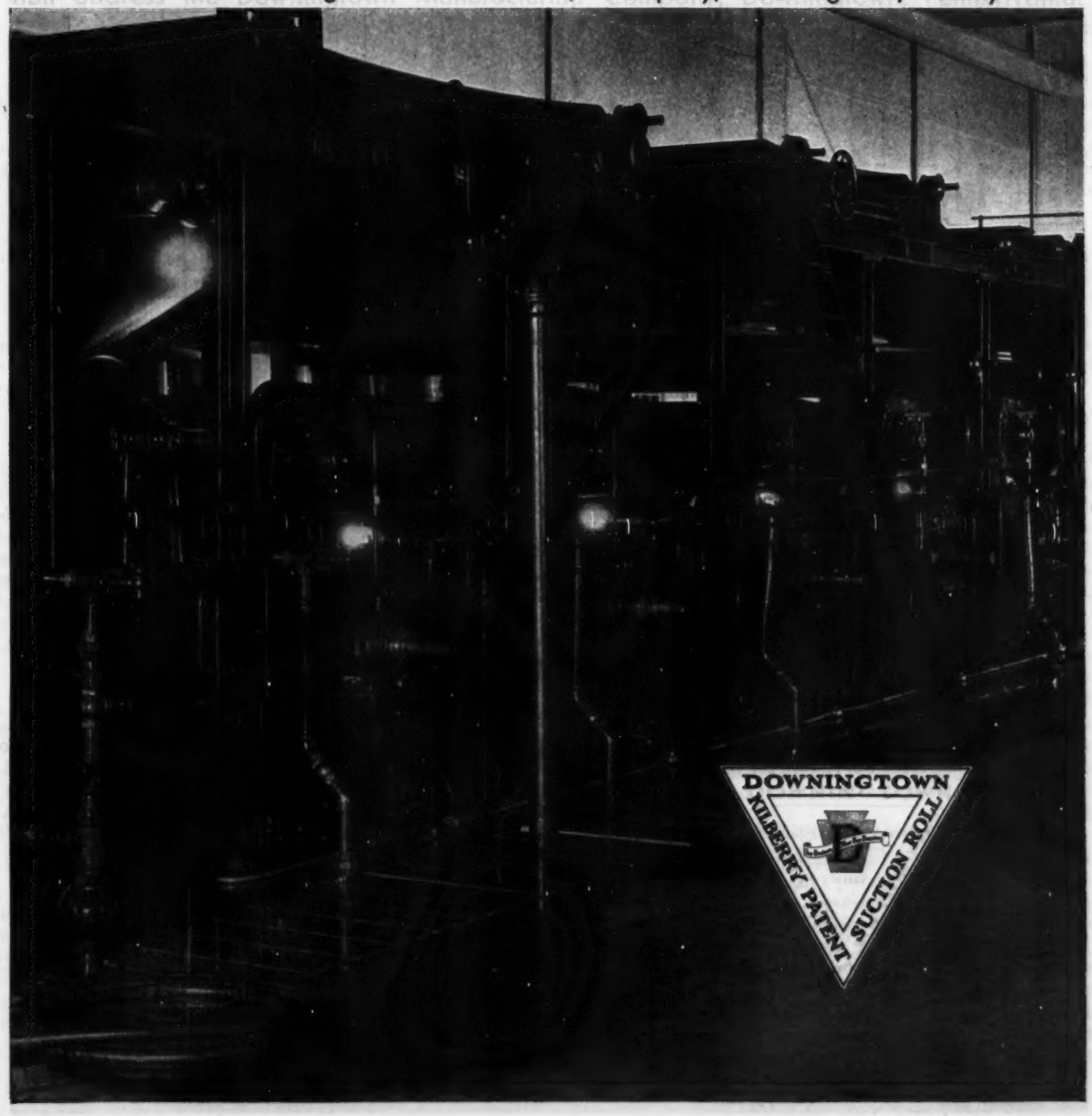
### General News of the Trade

Jim Coy, popular representative of the Flambeau Paper Company, is widely singing the praises of the North Carolina country in all its fall colors. Mr. and Mrs. Coy just returned from an extensive motor trip in that part of the world and motored through mountains described by Mr. Coy as the most beautiful he has ever seen. The travelers visited C. D. Brown of Bradner, Smith & Company at Tryon, N. C., and inspected Mr. Brown's extensive property holdings in the popular vacation country. The Coy family also were near the home of Jim Kimberly of Kimberly-Clark. No time was allowed for golf but it will be a long time before Jim ceases brightening up the Monday meetings of the Salesmens Association with accounts of the colors of the Carolina mountains.

George Gibson, who is at present associated with his father, George K. Gibson in the Chicago offices of the Mosinee Paper Mills Company, is to be one of the Northwestern University football alumni who will tangle with a team of Knute Rockne's former stars at a special charity game at Soldiers Field on Thanksgiving Day. George attended Northwestern around 1920, engaging in football fisticuffs along about that time.

Earl Barnard, manager of the Morris Paper Mills of Morris, Ill., has been appointed chairman of the committee on Unemployment and Relief of that city to work with Governor L. L. Emmerson's state-wide committee. Lee Wilson, superintendent of the same company, has been named as a member of the same committee. The group will survey the unemployment situation in Morris and work out various ways and means of remedying the unemployment situation and of giving relief to those out of work.

Downingtown Adjustable Suction Roll on wet felt of a seven cylinder Downingtown Board Machine. ✓ An installation such as this has many advantages. ✓ Downingtown Suction Rolls are built for Cylinder and Fourdrinier Machines for Couch and Press positions, and if desired, can be of the cantilever construction. ✓ For further information address the Downingtown Manufacturing Company, Downingtown, Pennsylvania.



# Northern Paper Mills Make Good Report

## Operations at the Green Bay Plant Most Satisfactory in the History of the Company—Mill of the Tomahawk Pulp & Paper Co., at Tomahawk, to be Sold at Public Auction Nov. 22—Mill Expected To Be Restarted At Early Date

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., November 17, 1930.—Operations of the Northern Paper Mills, Green Bay, Wis., continue to be the most satisfactory in the history of the company. Net earnings for the first half of the year amounted to $244,368, equal to $2.93 a share on the common stock after all charges. This represents a 30 per cent increase over the $187,439 reported for the same period in 1929. Sales gained only five per cent, indicating how effectively the company has improved its production methods and trimmed its costs. September and October orders ran ahead of those months in 1929 and it is predicted that the company's net will be considerably ahead of last year. There has been no reduction in wages or hours of work.

### To Auction Tomahawk Pulp & Paper Mill

Sale of the defunct mill of the Tomahawk Pulp and Paper Company, Tomahawk, Wis., at public auction will take place on Saturday, November 22, according to announcement of C. L. Baldwin, of LaCrosse, Wis., referee in bankruptcy. The sale will be conducted by the Wisconsin Valley Trust Company, of Wausau, Wis., trustee, and separate bids will be received for the real estate, the power dam, personal property or the entire estate.

The company failed last spring and the mill has been idle ever since. Attempts were made by a bondholders committee, and by C. B. Pride, former president, to effect a reorganization and place the mill in operation again. The auction finally was ordered. Organization of a new company as the result of this sale is confidently expected, with the view of placing the mill back in operation at an early date.

### Cooperation in Waste Lumber Utilization

Co-operative efforts of the Dells Paper and Pulp Company, and the New Dells Lumber Company, of Eau Claire, Wis., to utilize without waste every foot of logs cut is the beginning of a new relation of allied industries in Wisconsin that has previously been predicted by paper and lumber manufacturers as a coming step. Capitalists of Eau Claire, including W. L. Davis, president of the Dells Paper and Pulp Company have organized the New Dells Lumber Company to take over an abandoned sawmill at Eau Claire.

A provisional contract has been executed covering 60,000,000 feet of timber owned by the paper company, consisting of hardwood, hemlock and white pine and reputed to be among the finest stands in Wisconsin. Preference options also have been executed on 150,000,000 feet more of timber owned by the paper mill company. The arrangement provides that the Dells Paper and Pulp Company will buy all the by-products of the sawmill for use at the paper plant. The "hog feed" will be used for fuel, and the chipped wood for paper. William J. Kessler is in charge of the sawmill project.

### Marathon's Ashland Plant Is Busy

Prospects for continuous operation this winter are excellent at the Marathon Paper Mill Company's branch mill at Ashland, Wis., according to Henry Josephs, manager. Even a slight increase in employment may be necessary, he said. The mill is now employing 140 persons, and makes it a policy not to engage married women because of the need of work for those who are single.

In order further to protect its water power interests on the Wisconsin river at Stevens Point, Wis., the Consolidated Water Power and Paper Company, has purchased the property owned by the John Week Lumber Company. The land will be rented hereafter to the lumber company. The company operates a large dam in connection with its branch mill at Stevens Point, and has been acquiring title to all land which affects its flowage rights.

### Mills Make Use of Boat Facilities

The Hoberg Paper and Fibre Company, Green Bay, Wis., is one of the concerns making use of the harbor facilities there to ship by boat. During the last six months, the company received 10,100 cords of pulpwood via the Great Lakes from Canada, upper Michigan and Minnesota. Pulpwood shipments also were received by the Fort Howard Paper Company by boat, but the third Green Bay Mill, the Northern Paper Mills, used rail facilities almost entirely. Most of the coal used by these mills is shipped by boat also.

### Organize Reforestation Staff

Organization of a staff to undertake reforestation is announced by the Consolidated Water Power and Paper Company, Wisconsin Rapids, Wis. The new forestry department will be under the direction of E. B. Hurst, formerly wood buyer for the Munising Paper Company, Munising, Mich. A nursery is to be established on lands owned by the Consolidated company along the Wisconsin river. Since the company uses spruce almost entirely, the nurseries will be planted with it. Experiments will be conducted for some time to determine the best growing conditions before the program finally is launched.

The company has extensive holdings in Canada sufficient to operate its various mills for 36 years. Other tracts of trees now too small for cutting will be utilized to fill the gap until the spruce forest is ready as a source of supply. A tract of land near Markton will be the scene of the first plantings.

### Training Men for Battle

Safety schools at Wisconsin Rapids, Eau Claire, Rhinelander and several other cities in Wisconsin heard an address by Garrett Burgess, vice president of the King Refractories, Inc., Buffalo, N. Y., last week. His subject was "Training Men for Battle." He stated that 90 per cent of present day accidents can be avoided. He scored the system which scraps veteran employees and places younger men in their jobs so as to speed the machines into a new production pace. He urged upon his hearers the folly of the mere mechanical operation of machines, with the mind elsewhere. This is a major cause of accidents, he said.

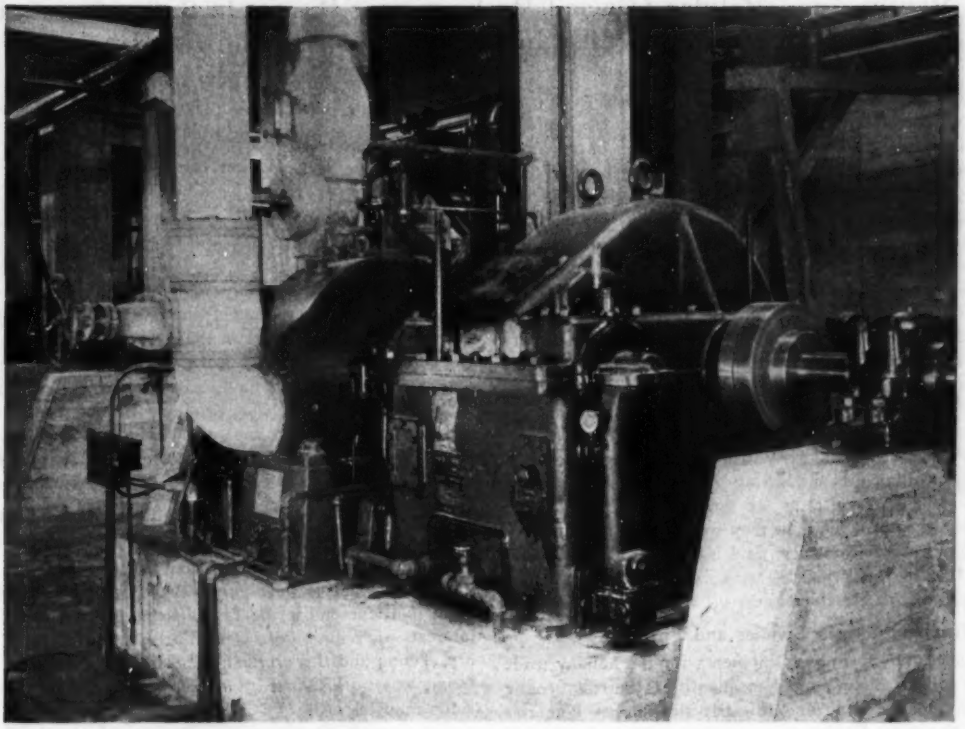
### To Provide More Adequate Water Supply

Officials of Neenah, Wis., have approved the movement of cities of the Fox River Valley to raise the level of Lake Winnebago to 21¼ inches at the control dam at Neenah. The purpose is to provide a more adequate water power supply in the dry months, and to flush the river and keep it sanitary during low water stages. Other cities are expected to follow suit, and a petition then will be sent to the government engineering department.

### To Rebuild Dam at Kaukauna

Rebuilding of the power dam at Kaukauna, Wis., where several paper mills are located, will be started within a year, according to reports from Washington, D. C. The dam has been in poor condition due to the decay of the timber work originally placed there. The new project will perhaps exceed $100,000. The government is now rebuilding the Rapid Croche dam on the Fox river between Kaukauna and Little Rapids, and will spend $150,000 on that improvement.

# TERRY



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**High speeds and low speeds are available without any change in the driving equipment other than a small governor adjustment. All speeds from minimum to maximum can be secured without steps. Unusually accurate regulation is obtained at all settings.**

**Control of speed may be mechanical or electrical, and remote if desired.**

**Ask for Bulletin S-89.**

**The TERRY STEAM TURBINE COMPANY**
TERRY SQUARE, HARTFORD, CONN.
**Steam Turbines - Gears - Shaft Couplings**

T-1069

# Philadelphia Paper Demand Slowly Expanding

## Business, However, Continues Somewhat Spotty, But Shows Considerable Improvement Over A Few Months Ago—Holiday Demand for Wrappings Has Set In Rather Encouragingly and Situation Is Generally Improved By More Stabilized Prices

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., November 17, 1930.—There has been continued growth of demand for paper generally in the Philadelphia section but while demand grows the orders continue of the hand to mouth type and business is spotty with alternating days of good buying and lagging interest. Continued campaigning by dealers in order to stimulate larger volume at this season has not had the effectiveness desired as customers continue to be cautious, curtailing stock and keeping it to the limitations of immediate future requirements and in some cases preparing more extensively for holiday needs. However, demands are limited compared with a year ago or to the normal advance holiday season. Those paper dealers who are classified as wholesale representatives or make contract buying a speciality have been reported as enjoying a fairly good demand despite the general tendency to postpone commitments until greater assurance of the coming year's trend of business generally is evident. This is particularly true of the merchants who cover the larger printing and publishing industries where interest soon should be evident in contracts for the new year. At present wholesale demands are broader than they were a few months back so that the outlook in that particular field is brighter. This applies to the general lines of book papers, with expansion in buying of the bulkier papers of this classification.

### Wrapping Papers Livelier and Firmer

Wrapping papers are growing in shipments for the holiday trade and with better orders, though small in quantities, there is firming of values which indicate the trend towards steadiness. The rise in the price of Southern Krafts a few weeks ago has done much to stabilize prices on these grades. The rise of $3 per ton has stimulated buying from the mills in a modest way so that the outlook is more encouraging for these highly competitive grades. Local dealers believe that the plans of the mills to operate on a four day week, as discussed at a recent gathering of paper men of the nation, will steady the kraft situation and may effect the advance in prices by manufacturers who are endeavoring to stabilize the market. By next year, provided conditions do not improve sufficiently to warrant continued schedule of operation, it is anticipated that these methods will be applied to obtain results that will eliminate the present competitive bidding for orders that have so upset the kraft situation this year.

### Drought Reported to Affect Paper Making

Philadelphia distributors state that they have been informed by manufacturers in the Middle West and below the Mason and Dixon Line that there has been difficulties experienced in manufacture of their products due to the lack of sufficient water power to maintain production up to schedule or to keep plants running and in a few cases the mills have been obligated to curtail operations in order to save on water supplies. It is also reported by a few manufacturers that they have been obliged to shut down for lack of water due to the prolonged drought. This is applicable to those sections of the South and West where the severe droughts of the past Summer and Fall have been most prominent.

### Holiday Goods Moving

Christmas demands for novelty and specially designed Christmas lines have been larger with the approaching days of December. The trade now is showing many attractive specialties that are to be effectively used in wrappings, containers, grease proof and waxed lines and in glassines, parchments, and several fine papers adapted for greeting card stocks or announcements, box coverings or bags. The demand for these specialities is better than in the ordinary year round selling grades.

### Bag Market Continues Disturbed

The bag market continues to be much upset although every effort is being exerted by the nationally prominent manufacturers to steady the situation. Competition is keen and the price situation much confused so that a market is uncertain as far as values are concerned from day to day, and quotations fluctuate accordingly. The board market still lingers in the dragginess of the past summer and prices continued at the lowest levels with chip as low as $30 and news at $32.50. Tissues are firm and in fair demand. Wax papers and food wraps have been moving in a slightly better seasonal activity. Celophane products have a broader market and growing consumption, and while demands soar the prices have been reduced as the Du Pont Company broadens manufacture, and gives to the trade and consumers the benefits of mass production.

### DuPont Co. Extends Cellophane Plants

The DuPont Celleophane Company, has completed the building of its new plant which is erected just outside the city of Richmond, Va., and is now going ahead with operation plans. The plant in Richmond is the fourth to be erected under the Du Pont interests of Wilmington, Del. There are two located at Old Hickory, Tenn., and the original plant at Buffalo, N. Y. The new addition was necessitated by the increasing use of cellophane in various industries.

### Philadelphia Quartz Co. to Build On Coast

There will be erected on the Pacific Coast an additional plant which will be given over to the production of silicate soda used in the manufacture of paper and soap products by the Philadelphia Quartz Company, of this city. The new plant which will be erected at a cost of $300,000 is to be built at Los Angeles on a 12 acre site which has been purchased at East Los Angeles. The construction of the plant will be directed by W. E. Lyons, engineer of the Philadelphia Quartz Company plant at Berkley, who has been sent to direct the installation of equipment and the building program. The new plant will produce silicate of soda for the paper industry and soap manufacturers in the Southwest and Mexico while the Berkley-Portland, Ore., plants will service the Northwest. Philadelphia headquarters will continue to serve all territory East of the Mississippi. The company also has founded a manufacturing plant in Tokio, Japan. The Los Angeles plant is under construction contract having been begun this month according to announcement made by A. W. Elkington, vice president of the company.

### Bicking Paper Co. Campaigns on K. B. Boards

Sales campaigning on the line of asphalt center boards made by the Bicking Paper Company, Downingtown, Pa., in the Philadelphia territory in the past few weeks has been productive of growing use of these boards for many purposes. The K. B. Boards are produced under the Kirschbaum process and have an asphalt center which eliminates the use of moisture proof linings and which sell at $55 per ton delivered. The boards are designed to keep out moisture and acts as a preservative of the contents. The Downingtown plant of the Bicking Company is equipped with special machinery which permits of the manufacture of the boards entirely by machinery that thoroughly coats the inner plys. It is being used by the U. S. Government for anti-aircraft shells. It

# MANY SALES PROBLEMS CAN BE TRACED TO *FAULTY SLICES*

**THERE are two main reasons why paper sales are lost. One is inferior quality. The other is excessive price.**

**The first is inexcusable. The second is possible to correct.**

**While the quality and cost of your paper does not hinge entirely on the operation of your slices—nevertheless, it is a very important contributing factor. Many sales problems have been traced directly to inefficient slice operation — and the Voith Inlet has played no small part in correcting this condition of deficiency in many mills.**

**In exactly 143 mills—290 installations have brought about IMPROVED QUALITY through more uniform formation and LOWERED COSTS through exclusive features of design and operation.**

**Why wait until times of glowing prosperity to reap the benefits of this equipment. RIGHT NOW is the time this machine can do you the most good.**

**Write the Valley Iron Works Co., Appleton, Wisconsin, for full information.**

**VALLEY**

**Equipment for Paper and Pulp Mills**

New York Office: 350 Madison Ave.
Western Mfg. & Sales Div.: Smith & Valley Iron Works, Portland, Ore.
Canadian Representatives: Pulp & Paper Mill Accessories, Ltd., Montreal, Canada

is also being extensively used by local manufacturers of containers and boxes for conversion into moisture proof products for shipping and storing purposes. Allen G. Center is representing the Bicking Company in its drive in the Philadelphia section.

**Wrapping Paper Merchants to Join in Trade Rally**

With the launching of the campaign to build up and create a stabilized wrapping paper market in this territory and to co-operate with the National Paper Trade Association along similar lines, the Philadelphia Paper Trade Association, Wrapping Paper Division will hold on November 21, in the evening at the Penn Athletic Club, a rally of the merchants in this branch of the local industry and have extended to both members and non-members an invitation to participate in the gathering. This combination meeting of all wrapping paper dealers in the city and vicinity, is in accord with the previous plans announced when initial steps were taken along the line of united efforts at the gathering at the Elks Club held a fortnight ago when the dealers were the guest of George W. Ward under whose auspices the luncheon session was held and at which time a committee of local wrapping paper associates were appointed to plan and provide for reorganization of the Wrapping Paper Division and to promote activities along the way towards greater unity among the merchants and their co-operation with the association in its efforts to stabilize the division of the trade and to maintain the welfare of its members. At the rally to be staged in the Penn Athletic Club, Leo Altholz, leader of the Wrapping Paper Merchants of Chicago, will be the guest speaker while Frank Floyd, of the National Paper Trade Association will also attend and will discuss co-operation of the merchants and benefits of united efforts in stabilizing this branch of the industry, through a survey of the Wrapping Paper Market and the results accomplished under an organized program.

**Credits Discussed at Paper Trade Meeting**

With the meeting of the Fine Paper Division of the Philadelphia Paper Trade Association held last Wednesday at the Down Town Club there was a discussion and report on the credit situation which followed the routine session. The discussion was carried on under the Credit Bureau and the Credit Interchange relations of the association were the main topics. Following the discussion there was a meeting of the Trade Relations Committee of the Paper Trade Association with the Credit Bureau of the Philadelphia Typothetae when the matter of credits were given careful study and consideration. President W. S. Wilcox of the Association and head of the firm of Wilcox, Walter, Furlong presided.

**Envelope Manufacturers Hold Annual Session**

Envelope manufacturers who comprise the membership of the National Envelope Manufacturers Association, met in Chicago, last week in the annual convention held at the Blackstone Hotel, when the Philadelphia trade was represented by R. W. Fishburn, head of the envelope department of the Whiting Patterson Company. It was announced by the local representative that a great deal had been accomplished and a large representation of envelope manufacturers attended, upon his return to Philadelphia and report to his firm.

**Allen E. Whiting to Entertain Hawaii Governor**

President Allen E. Whiting, head of the Whiting Patterson Company, 320 N. 13th street, will be host to a former associate of his firm who now is Governor of Hawaii and who will be the guest of Mr. Whiting over the Thanksgiving holidays. Governor Lawrence M. Judd, of Hawaii will be entertained at the home of Mr. Whiting in Devon and will join him in attending the big football games that will be played at the week-end and throughout the term of his visit. Governor Judd who is most popular in Hawaii and whose genial personality has won for him a host of friends across the Continent of America and in all parts of the world began his business career upon his graduation from school in Connecticut as shipping clerk with the New York branch of the Whiting Patterson Company and where he served two and a half years before returning to his home in Hawaii. He since has risen to be the chief official of the Hawaii Government. He was born in Hawaii the grandson of a Congregational Missionary who went to the Islands more than a hundred years ago and whose family settled there. Last summer Governor Judd entertained President Whiting, who, always has maintained a close friendly association with the chief executive of Hawaii, at his home in Honolulu where he was the guest throughout the summer and the recipient of many honors from the natives and settlers and prominent authorities during the sojourn of more than two months, and tour of the tropical Isles.

**Shryock Bros. Install New Heating System**

Shryock Brothers, whose Philadelphia headquarters are located at 924 Cherry street, have been making further improvements in the century old firm's mills located at Downingtown, Pa. There was a temporary shut down last week when the contractors installed a water heating system which necessitated closing the mills for a few days and when a huge tank and iron platform for its support were erected on the adjoining grounds. The building of the new tank and the installation of the modern heating system was completed by the week-end and the firm resumed operations today, on its line of high grade binder boards. The Shryock Brothers mills, which were the first to make straw boards back in Colonial years. and which have a history of business extending for more than a century in the manufacture of paper boards, have in recent times installed many modern units in machinery and power and paper making equipment which now bring the mills right up-to-date and which provide for speedier handling of the growing demands for its better grades of binder boards. It was necessary to install the new heating system before the cold weather hardened the ground on which the iron platform is built and prevented the temporary suspension of heating and to permit of the completion of modernizing the plant equipment. Production is now much increased.

**Thomas M. Royal & Co. Show Large Increase**

When the closing of the annual accounts of the Thomas M. Royal & Co., bag manufacturers, 7th and Grange streets, are disclosed there will be shown an increase in business for the past year of half million dollars.

The firm which closes its fiscal year December 1 has been rapidly expanding as the use of its cellophane face bags and its larger assortment of coffee, confectionary, bakery and general lines of bags are extended. The plant of the Royal Company is one of the largest in the East and covers an extensive area. It has been recently further equipped with new units to meet the growing business and national distribution of its bags. Vice President Gordon F. Friend, who attended the convention of the National Coffee Roasters Association held at the Pennsylvania Hotel, in New York, last week has returned to headquarters.

**Wm. McKeever Directs Paterson Parchment Office**

The Philadelphia branch offices of the Paterson Parchment Company, Wax Paper Division, which are under direction of the William McKeever, local manager of this branch of the business, now are located in Room 878 Drexel Building. Mr. McKeever formerly had offices on the 3rd floor. The local officers cover the sales of Paterson Parchment wax papers in this territory, for the Passaic, N. J., manufacturers.

**D. L. Ward Co. Entertains Engravers Club**

The D. L. Ward Company, was host to the members of the Engravers Club of Philadelphia at a rally held in the headquarters in the newly erected and unique offices, sales and warehousing combined structure, of the Terminal Commerce Building, Broad street and Callowhill, last Monday. Following a luncheon held at the Elks Club just across the way the group of engravers adjourned to the Ward Company quarters and were shown over the new location by President George W. Ward and William A. Hentz, vice president of the company.

# CLEAN Screened Stock ...and Plenty Of It...

**Obviously, the ideal way to assure clean stock is with the minimum of agitation after it enters the screen. Undue disturbance often forces through the slots dirt specks that ordinarily should float away.**

**The Harmon Inclined Screen,—the pioneer inclined type screen, built exclusively by Bagley & Sewall,—is designed and constructed to pass the maximum amount of *clean* stock, *without excessive disturbance or turbulence.* Its inclined plates promote the rapid, free flow of stock, with a positive current that floats dirt off at the low end, without rakers or showers. Special ground chilled cams, each operating an individual vacuum chamber, give a sharp, upward, slot-cleaning blast and a s-l-o-w downward draw that brings through the maximum amount of stock. Stock keeps moving, without plugging or overflow, and *without supplemental agitation.***

**Its unusually large, non-clogging screening capacity and positive action permit the use of finer-than-usual plates,—another deterrent to the passage of dirt. Actual experience, in mills that measure efficiency by quality as well as quantity, has proven that the Harmon Inclined Screen delivers more and cleaner stock at lower upkeep and power cost than any other type of diaphragm screen.**

***We'd like to tell you more about it,—write us.***

## The Bagley & Sewall Co.

**Watertown, N.Y.**

50

# Russian Pulpwood Prevents Canadian Embargo

## Angus McLean, Widely Recognized Pulpwood Authority, Says Recent Importations From Russia Make It Clear That Embargo On Canadian Pulpwood Will Neither Cause United States Mills To Move To Canada or Deprive Them of Their Business

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TORONTO, Ont., November 17, 1930—Angus McLean, of the Bathurst Company, Ltd., who was recently in Toronto where he was made president of the Canadian Chamber of Commerce, and who is generally recognized as one of the foremost men in the forest industry, in a statement touching the recent importation of more than 250,000 cords of Russian pulpwood by United States mills, said: "It must now be clear to every reasonable person that an embargo on the export of Canadian pulpwood will neither compel United States mills to move to Canada nor deprive them of the proportion of their business which has been based on Canadian pulpwood, because those United States mills are already importing Russian pulpwood in increasing quantity and cutting down on their Canadian imports. Moreover, the price of Russian pulpwood landed at the mills is about the same as Canadian wood, and the quality is high. When it is remembered that Russia has the largest pulpwood forests in the world, is eager for an outlet for her forest products, and has command of cheap labor, it will be understood how great a menace to the timber business she is becoming."

### Mill Closures

Closure and prospects of closure of a number of Canadian news print mills, though disheartening, is viewed as constructive by many who are watching developments in the industry. Observers hold that recent shut-downs may have a definite connection with the implementation of merger plans of leading news print companies. Over production has been menacing the news print industry for a number of years; the current business depression, with a consequent decrease in demand for news print in the United States, has accentuated the spread between supply and demand. Closure of mills may represent the first step in plans to bring existing production into line with market requirements and place the industry, as a whole, on a firmer basis, it is thought. Abitibi Power and Paper Company has announced the closure of its mill at Sault Ste. Marie and the company's mill at Espanola is shut down. Canada Power and Paper Company is faced with the prospect of closing its St. Maurice mill while the plant of the Thunder Bay Company, at Port Arthur, jointly owned by Abitibi and Canada Power and Paper, has little work in prospect. Officials have made no definite statement in regard to the St. Maurice mill. In the case of Abitibi's Sault Ste. Marie unit, it has been stated that the mill will be closed for an indefinite period. Whether these shut downs are definite steps in a contemplated reorganization of general operations following merger plans remains to be seen. Business conditions in the United States have resulted in a lower demand for news print and shipments from Canada have declined considerably this year. But in closing down the mills it is possible that the companies in question had motives more far-reaching than those governed by the immediate situation in the industry. With a potential production of 900 tons removed, operations at other plants should be quick to reflect any improvement in demand for their products. Total rated capacity of Canadian mills is 11,700 tons daily. The spread between supply and demand would be narrowed materially by the reduction of this output by nearly 8 per cent. In the meantime meetings of news print executives continue to be held. While no statements have been published it is understood that discussions are getting round to the all important question of valuation of properties. Before any active steps toward merging news print companies could be taken this vital factor would have to be thoroughly analysed. Weeding out of high cost mills and readjustment of capitalization will also have to be considered in the case of a merger. Already mills are being closed down, for tonnage is the all important consideration at the present time. Observers of the news print situation here do not look for a betterment in prices for some time. Accordingly, it is felt, the situation must be met by a readjustment of production, which, in turn, must lead to other adjustments all down the line.

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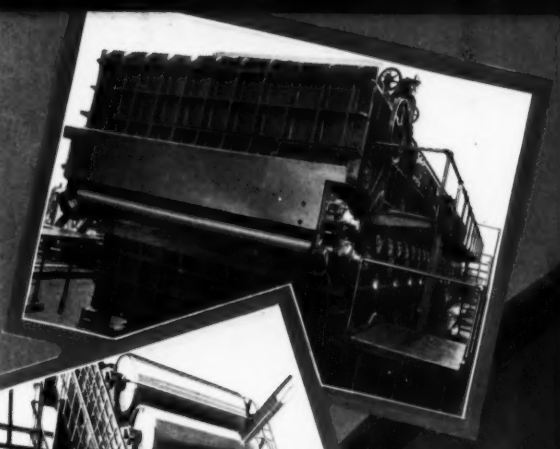

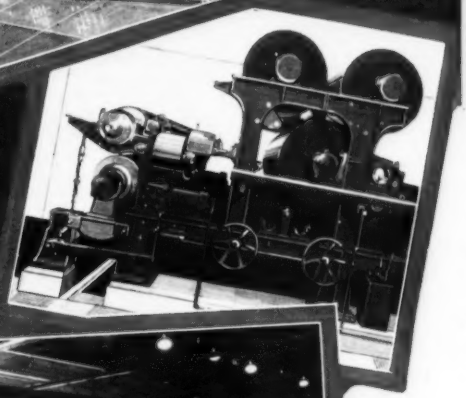

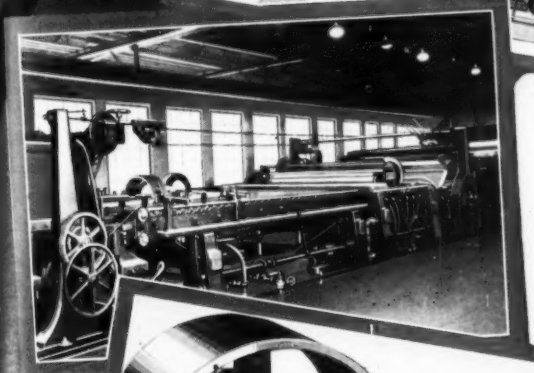

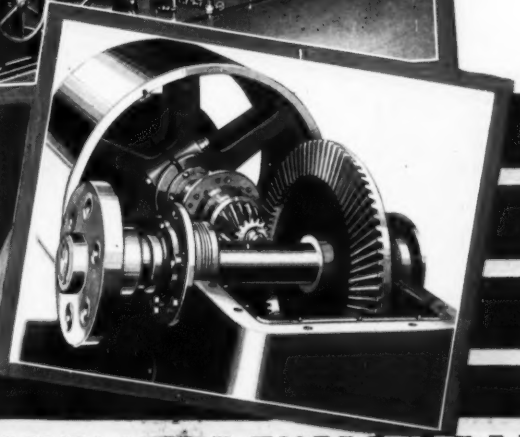

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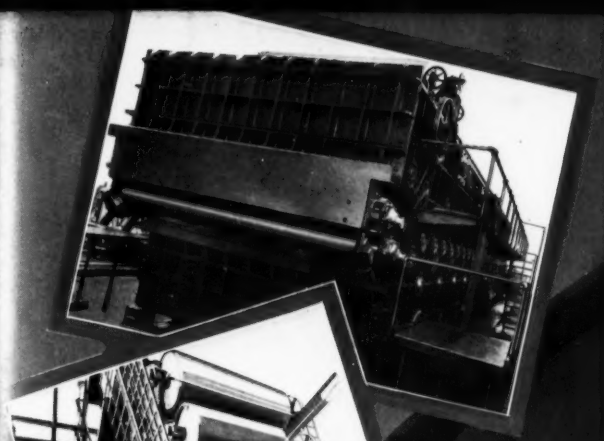

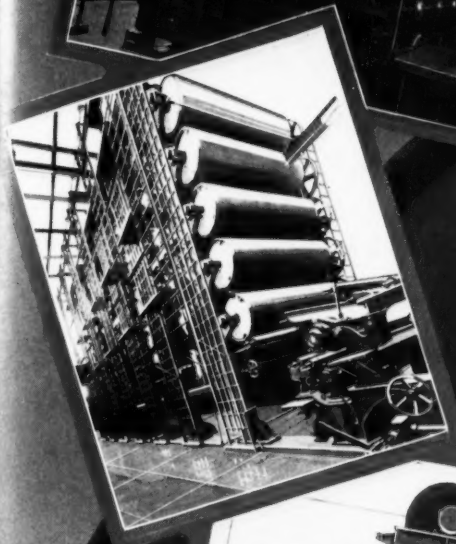

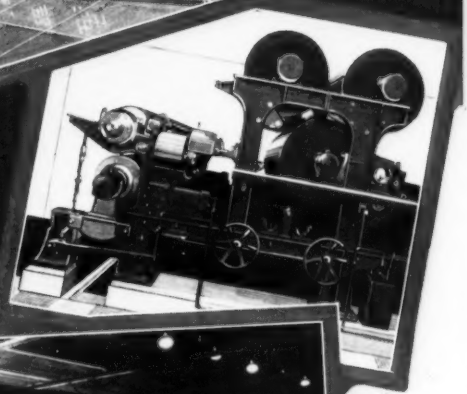

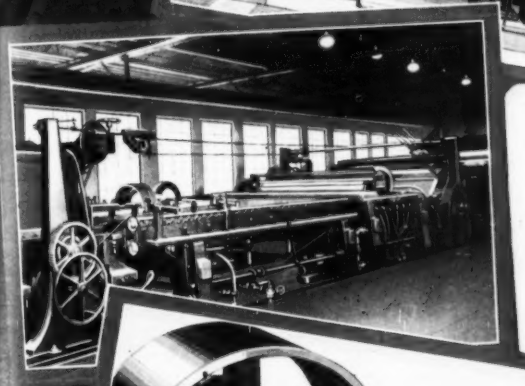

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# THE PROOF OF THE PUDDING"—

When in the market for a jordan you quite naturally want the jordan that comes closest to doing exactly what you want a jordan to do.

That being the case, and it always is the case, which is the most logical thing to do—

Go to a jordan builder who makes just one kind of jordan and trust to luck to adapt the jordan you buy to the requirement—

Or, come to Shartles where you have both long taper and quick taper jordans to choose from—also each in several sizes?

Remember that we build not only good jordans but that we build a line of jordans and are the only manufacturers doing so.

A list of mills using Mizmis will be sent upon request.

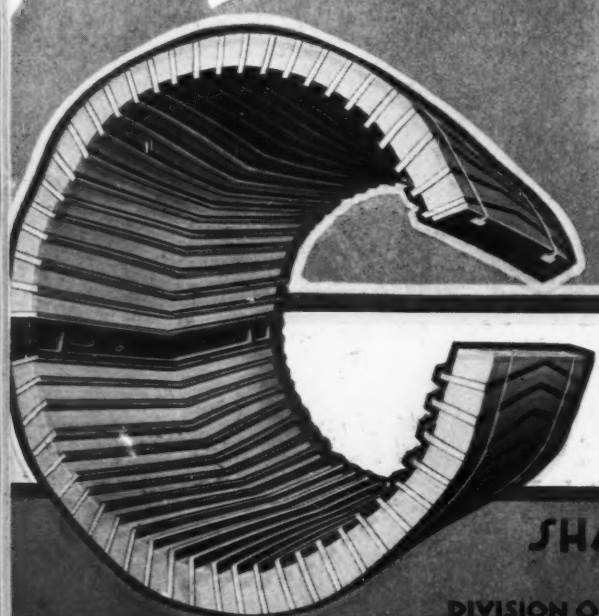
lies in the eating thereof—and hundreds of mills have eaten.

It is easier to "shove in" a Bulldog filling than to "build in" other kinds.

If you use bronze and have specks in your sheet, remember that there is no steel used in a Bulldog filling—no chance for specks to appear in the sheet.

Then, too, they are adjustable to the variations in size of different jordan shells.

Glad to be of service on fillings—always willing to let comparative performance decide the issue between a Bulldog and any other kind.



## BULLDOG FILLINGS

**THE PIONEER ASSEMBLED FILLINGS AND STILL THE BEST ON THE MARKET**

**SHARTLE BROTHERS MACHINE CO.**
**MIDDLETOWN, OHIO**
DIVISION OF THE BLACK-CLAWSON CO. HAMILTON, OHIO
EXPORT OFFICE 15 PARK ROW NEW YORK CITY

duction and consumption—and as well to the lack of coordination between the different units in Canada. It was pointed out that too much board is still coming into Canada from the States, nearly $100,000 worth having been imported during the month of September alone. This condition is explained by the parties interested to be due to long-time contracts which have not yet expired. There was too much board turned out and there are new mills coming into production at too frequent intervals. As to this phase, time has done much to remedy the fault, since the use of paper board has rapidly become enlarged. Many new uses have been found, and in many lines where it had begun to be used in an experimental way it has been accepted up to the full of an industrial demand. Matters had so far progressed toward an amendment of market conditions as to hearten the manufacturers and make them willing to undertake measures to stabilize the business as it gradually came into quieter waters. "Perhaps there is no branch in paper making within which there recently has been so many opportunities for branching out, so many new uses developed, and so many established lines substantially enlarging their use of paper board products," said the report. "For several years it has been steadily working its way into the packaging field, and quite recently there has been what seems almost like a concerted movement to put every possible product into attractive packages and to use paper board for the purpose. Paper board cartons, replacing wood boxes, have come to the front also, and are used for packing almost everything that is to be shipped by railway or water freight, excepting only live stock, automobiles and heavy machinery. The railway officials have encouraged this habit and have prepared specifications as to size, thickness of board, its strength and even composition. Canadian paper board has a better reputation in the market than that made in the United States for the reason that it is made partly of good wood pulp. The material chiefly used in the States is waste newspapers which have but little wood fiber in their content at first, and practically none when it is reworked. This feature is operating to increase the export market for Canadian paper board to the United States and to some European countries. In short, the paper board business in Canada is decidedly looking up. It is assuming an ordered and organized habit of life and it is very soon likely to become a close second in bulk of production in the paper field in Canada."

### Notes and Jottings of the Trade

Toronto will probably be selected for the coming convention of the International Brotherhood of Paper Makers which is scheduled to convene on the first Tuesday in March. Ottawa has also made a bid for the gathering which attracts between 200 and 300 delegates from the locals in Canada and the United States. Western locals are anxious to have the convention in Toronto. The last gathering was held in Montreal. The executive committee will determine where the convention will next be held.

Chester W. Alden, woodlands manager of the Nashwaak Pulp and Paper Company, has moved his family to Portland, Me., from St. John, N. B. He was in St. John and Fairville recently on a business trip for the Nashwaak interests, which form a subsidiary of the Oxford Paper Company. Mr. Alden was transferred from Portland to St. John about seven years ago and was moved back to Portland several weeks ago because of the discontinuance of pulp manufacturing at the Fairville plant and pulpwoods operations on the company's timberlands in central New Brunswick.

During the past summer nearly 100,000 cords of pulpwood, valued at almost $1,000,000, were towed across Lake Superior. A final check-up shows that only a few hundred cords were entirely lost, representing about $1,000 out of the million.

Enveloped in a scalding stream of water when a valve in a pit in which they were working at the Great Lakes Paper Company's plant in Fort William broke, three men were seriously injured. Those in the hospital are Jack Knight, Harry Schmidt and Thomas Tronson. The two first named are the most seriously burned.

A business visitor to Toronto a few day ago was L. C. Leach, of the Drummondville, Que., plant of the Dennison Manufacturing Company, Ltd. The firm is now carrying on manufacturing operations in the crepe department of the new Canadian plant and are shortly to start the tag making machines.

The Toronto paper trade has received the initial number of *The Alliance Coater*, a monthly message to users of coated papers, published by Alliance Paper Mills, Ltd., 350 Bay street, Toronto. The publication is a very creditable one and contains many reproductions of direct mail advertising pieces done on Alliance Folding Enamel, while there is also considerable well printed letter press. Accompanying the first number is a stiffener containing a calendar and a picture and sketch of the company's coating plant at Georgetown, Ont.

"Ideas in Print" is imprinted on the envelope enclosing a lot of examples of fine printing on Howard Smith papers just mailed by the company from their Toronto and Montreal offices.

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### Richard Gray Speaks on Conditions in Russia

[FROM OUR REGULAR CORRESPONDENT]

WATERTOWN, N. Y., November 10, 1930—Richard Gray, master mechanic of the Bagley & Sewall Company, delivered an interesting address on conditions in Russia this week before the members of the Chamber of Commerce. That country with its industrial program and its system of furnishing food, clothing and other essentials to the people through its own form of government co-operative stores is undoubtedly making remarkable progress, according to Mr. Gray, who has just returned after spending many months in that country setting up papermaking machinery. He made a tour of Europe prior to going to Russia and he discussed this before dwelling on conditions in the latter country.

"The mechanical engineer in Moscow gets a year of training and is then expected to go out and work," he said. "They have been trying to do too much in a short time and prior to a few years ago the industrial life was badly disorganized. Every workman pays ten per cent of his wages for the benefit of the industrial program and all the stores in Moscow are run on co-operative basis. Nothing can be bought only in these establishments and the country has taken on a big job in attempting to feed and clothe all its people through these establishments.

"On our way to the Volga River Paper Mills at Belahnka we were struck with the large number of people lying around the railroad stations. The people are always drifting and since the industrialization move many big strikes have occurred. As many as 3,000 men have walked out of a plant in a single night and in a large plant of the General Electric Company from 4,000 to 5,000 men went on strike. We went up the Volga River in a motor boat to the paper mill where we were to install the machinery and we were surprised to find a modern village awaiting us. Everything is military and it required two days to obtain our passes before we were allowed to enter the mill. They use the Volga River water and have a pump house and filtering plant in connection with the mill.

"There is one hinderance to the industrialization program and that is the fact that the Russians do not like work and time means nothing to them. There are certain rules for the worker and a delegate goes through the mill at various times to get all the complaints. One difficulty was the fact that we could find no determining factor in the mill and they were always inclined to pass the buck to somebody else when it came to an important decision. They have the idea that in forty years the greatest engineer in the country and the meanest worker will be on the same level with the same salary and that all will be happy together. One workman told me that we must believe in communism in America because we set up fine machines in their plants and consequently must approve of their government. I told him that it was purely a business proposition."

## West End Mill Extensively Improved

[FROM OUR REGULAR CORRESPONDENT]

CARTHAGE, N. Y., November 17, 1930.—Extensive improvements started over a year ago at the plant of the National Paper Products Company, have been virtually completed. In October, 1929 the West End Paper Mill in this village was taken over by the Crown-Zellerbach interests and the new owners at once awarded a contract to a Watertown concern to begin the reconstruction program. A new machine room 76 by 120 feet with basement was first completed and it now houses two paper machines with a capacity of thirty tons of paper daily. The old paper machine was revamped by the Bagley & Sewall Company besides being entirely rebalanced and fitted with new bronze bearings so that the speed was increased to double its former capacity. The second machine is larger with about the same rate of speed. Both are electrically driven by motors on sectional drives so that the speed is delicately controlled. One of the features of the new machine room at the West End Mill is a large crane which runs the entire length of the department and is capable of handling the heavy machinery.

Other departments which have also been rebuilt include the beater room, engine room and wet machine room. The basement is built on solid rock foundation so that the machines when in operation give the least possible vibration. The machine room is equipped with steel sash and fractured ribbed glass on the sides with a skylight on the roof. The first machine was placed in operation last February when it was announced that the improvements would allow the plant to be operated in a more economical manner than ever before. Last May the firm of Hodge & Foster started the task of remodeling the wood supply to the pulp mill and the placing of both ground wood and sulphite tanks to supply both mills. The two tanks will supply both mills with pulp in wet form, thus eliminating the labor of converting it into laps and again beating up the stock before using it on the paper machines. The ground wood tank is 70 feet in height and 28 feet in diameter while the interior is supplied with agitator wheels driven by electric motors which keep the stock constantly in motion, thus preventing the settling of the solid pulp to the bottom of the tank. It is a great circular chest with a concrete lining and foundation. The sulphite tank has been placed inside the sulphite mill and it is made of the same materials and about the same size as the other.

Both of these tanks have been connected with two similar ones at the West End Mill by means of a system of wood pipe lines. The method is regarded as unusual and is the only one in operation in Northern New York. This new system is instrumental in carrying the sulphite from one mill to the other and by the use of a pumper ground wood is also carried up the line. It is claimed that the method reduces the expense and time of shipping and transporting these materials between the two plants. A drop of forty feet from the higher plant to the lower provides that no pressure shall be needed in running the pulp underground. The pump was installed by the Gould Pump Company and will supply adequate power for running the wood from the lower mill to the upper one. It is claimed that the pine used in the system will last considerably longer than iron.

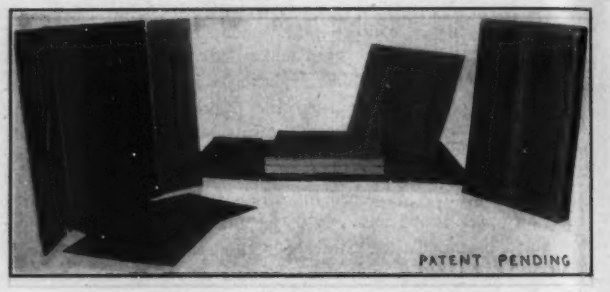
The equipment at the National Paper Products branch has also been re-arranged to some extent. The chippers and splitting machines have been placed in a separate building located across the canal from the sulphite mill. This building has been reconstructed of concrete and steel in order to allow the housing of the heavy machines which are electrically operated. This department is now connected with the sulphite mill by a steel conveyor bridge constructed of iron and covered with asbestos roofing and corrugated siding. The bridge stands on steel towers so that the chips are carried into a new pent house, built of brick and concrete above the roof line of the sulphite mill, from which they are spouted directly into the digestors.

The electrical equipment was supplied by the Westinghouse Company. William P. Beech of the V. D. Simmons Company, of Chicago, was the engineer in charge of the project and is receiving much praise for his efforts in the undertaking. The Simmons Company designed the mills of the Crown-Zellerbach Company on the west coast and Mr. Beech is regarded as an expert in paper mill design. Both mills are under the management of E. B. Eddy while the maintenance task is supervised by Charles Finch, of this village. It is estimated that approximately $650,000 has been expended by the Crown-Zellerbach interests in their vast expansion program.

## New Paper Case for Flat Papers

An illustration is presented herewith of a new paper case to carry sheet post cards and flat papers.

The photograph shows, at the left, the case and two pads or exactly as it is received by the customer. In the center, the method of loading is shown with one pad beneath the load and the other pad ready to be placed on the top. On the right, the case is shown completely sealed with paper tape and ready to ship. The case is made of double walled, 275 lb. Mullen Test corrugated board and the pads are made of single walled, non test corrugated board.




PAPER CASE FOR FLAT PAPERS

It was designed for the Department of Public Printing at Washington, D. C., and has been tried and proven to be successful by actual shipment. It will be noticed that when compared with the two-piece telescope type of case so commonly used, that all stitching and expensive sealing equipment is entirely eliminated.

The saving of material in this type of case, when compared with the case now used by the Public Printer, is 7.952 feet per case and the weight, 1.063 pounds per case. The saving of material and cost of manufacturing in this style of box without the pads, over the telescope style, is handsome.

The load in the sealed up case shown in the photograph, has three-eighths inch cushion on two sides, nine-sixteenth inch on top and bottom, three-quarter inches at each end and one and one-eighth inch cushion on each corner. It is sealed with three tapes by hand and by one operator and it is never necessary to reverse the box.

Additional data regarding this new case may be obtained from Frank Watson, Box 21, Walbrook Station, Baltimore, Md., who has been in the paper container business for twenty years and converted the government to the use of paper cases for sheet post cards.

## Open New Cellophane Plant at Richmond

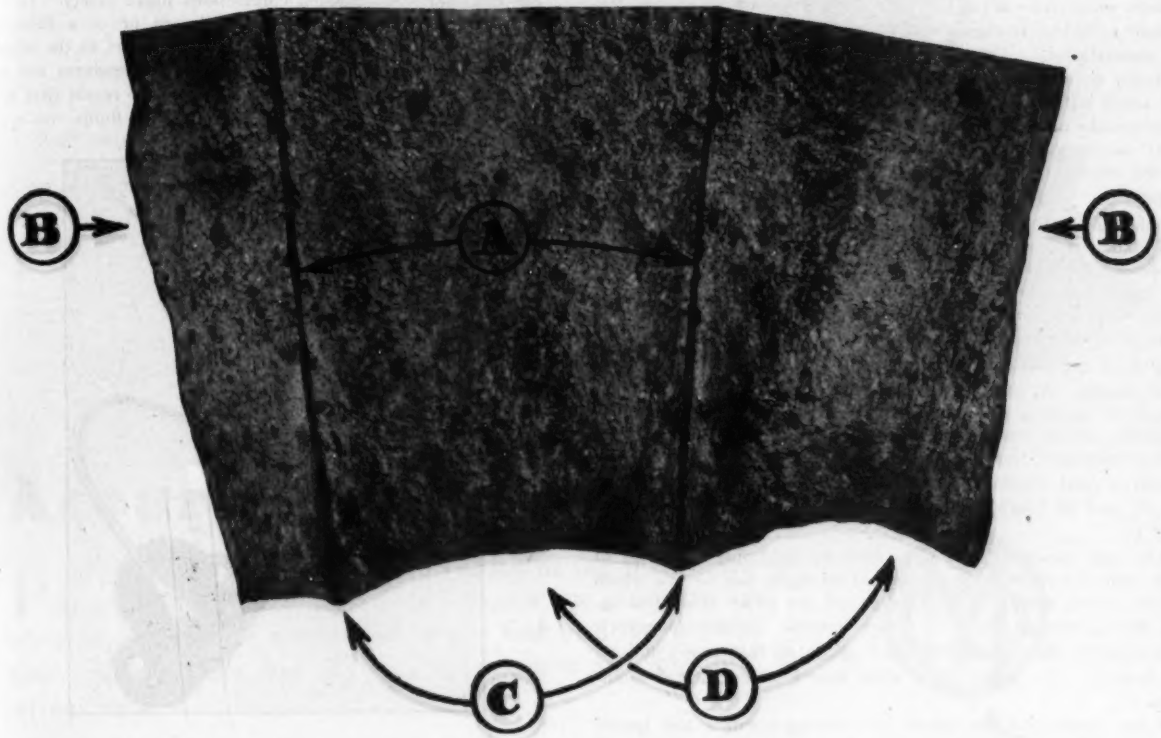
The Du Pont Cellophane Company announces the opening of a new plant just outside the city limits of Richmond, Va. Operations started November 1, with about 200 workers.

This is the fourth in the series of Cellophane plants, two others being located at Old Hickory, Tenn., and the original plant at Buffalo, N. Y.

The erection of the new plant was due to the increasing use of Cellophane in many major industries including meat packing, baking, tobacco, candy, textiles and various food products.

# How Are Your Arches Holding Up?

**Compare the next ARCH that falls or is torn out, with section illustrated below—*this ARCH was laid in KROMEPATCH.***




**A** Thin even KROMEPATCH joints bond brick into a monolithic structure. Note absence of crumbling, fluxing, bubbling and squeezing out of KROMEPATCH.

**B** In tearing out this section, the brick broke while KROMEPATCH joints remained intact. The joints are stronger than the brick.

**C** KROMEPATCH protects brick by resisting destructive elements, preventing penetration at joints. Note how joints project, proving conclusively that KROMEPATCH is more resistant to abrasion and destruction than brick themselves.

**D** Brick wear back in center (concave) while strong KROMEPATCH joints project, giving protection where it is most needed and thus increasing service life of arch.

**REMEMBER:**—Joint failure is caused by either crumbling or melting of bonding material.

Crumbling joints (material that lacks bond) allow heat to penetrate, exposing corners of brick which crack and fall out. This action repeats itself and soon joints are wide open and you need a new arch.

Joints made of clay base cements (lacking refractoriness) soften at low temperatures and flux sides of brick. Bonding material and fluxed brick bubbles from joint allowing heat to penetrate. Result—joints deeply cut out and short arch life.

KROMEPATCH Cement is primarily chrome ore—does not crumble, squeeze out or flux brick. Use it and avoid short ARCH and refractory lining life.

***(KROMEPATCH does prolong the service life of furnace linings.)***

*"Distributors in Principal Cities"*

**E. J. LAVINO AND COMPANY**
REFRACTORIES DIVISION
CHROME, MAGNESITE AND SILICA REFRACTORIES
BULLITT BUILDING PHILADELPHIA

*Pioneers in Chrome Refractories*

## Paper Towels in Storage

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 19.—Some difficulty has been experienced by the Government in purchasing paper towels that will prove satisfactory for use after a period of storage. The purchase specification generally used as similar to that suggested in Bureau of Standards Circular No. 294. The difficulty in most instances is found in towels that have complied with the specifications when received but have deteriorated to such an extent after a short period of storage, that their absorbency is so reduced as to be unsatisfactory. The tests of weight, bursting strength and absorbency do not seem sufficient to assure the purchaser that a paper towel will prove satisfactory if not used within a period of four months or so. Little is known at the present time of the effects various storage conditions have upon the rate of absorption, or the influencing factors which tend to produce a change in the absorbency. Further results in study of this problem have been obtained.

To study the effects of storage conditions upon paper towels, seventeen different samples of towels, representative of the different types, were obtained from various manufacturers. The towels were tested for weight, bursting strength, tensile strength and absorption as received. Samples were then stored in the paper section of the Bureau of Standards for periods of one, two and four months. At the completion of each period the samples were tested for bursting strength, tensile strength and absorption. Four duplicate sets of towels were selected from each lot of towels for a heat treatment test. Each set of towels was given a different period of heat treatment. The periods of heat treatment were 3, 24, 48, and 72 hours respectively, and the temperature used was 100° C.

The heat treatment tests were made to determine the effect of heat upon the rate of absorption and strength, and to find which period of heat treatment would approach the effect of natural aging during storage for four to six months. In this manner it was hoped to develop an accelerated aging test that would indicate the behavior of a paper towel when stored under natural conditions.

It was found that the values for bursting strength and tensile strength did not change appreciably for any period of natural aging up to 4 months or for heat treatment up to 72 hours. This would indicate that the strength is not appreciably affected during normal storage periods. The absorption values show clearly that some towels changed rapidly in absorbency over a period of four months natural aging, while other towels did not change appreciably within this time of storage. The differences in absorbency of different towels on aging were not related to the fiber composition in any respect.

A low initial rate of absorption seems quite advantageous, for as a rule such towels were the most stable.

There is a fair relation in the order of grading between the artificial aging and natural aging. In general, the most stable towels under natural aging were the most stable under heat treatment. The 3-hour period of heat treatment seems more drastic than the 4-months natural aging period and is probably commensurate with some time greatly in excess of any normal storage period. Possibly a shorter heating time would more nearly approximate the effects of natural storage.

In general the rosin and acidity are low in the samples having the better absorbency values and increase as the absorbency decreases.

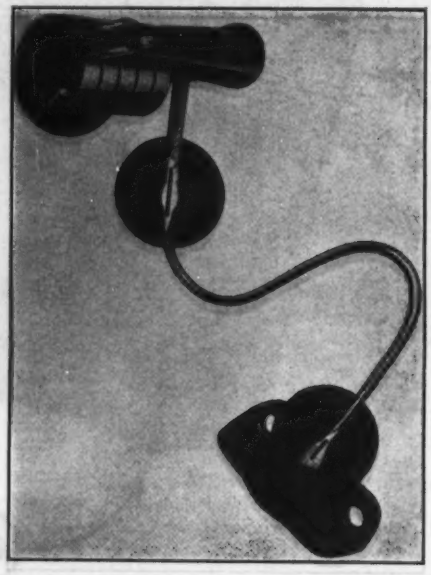
This relation of rosin and acidity to absorbency also gives an approximate indication of the stability of the towels, for acidity and rosin are highest in the least stable samples.

The results obtained so far in this investigation are sufficient to justify further study of the relation of the rosin content, acidity and heat treatment tests to the loss of absorbency, and additional tests of this kind are in progress.

## New Foxboro Gauge Movement

The Foxboro Company of Foxboro, Mass., perfected during the current year an alloy-steel helical spring movement for its recording gauges. This new Foxboro gauge movement is of one piece tubing—all steel and all welded. It combines maximum safety with high resistance to commonly encountered corrosive agents. One of these new alloy-steel helical movements is illustrated herewith.

All steel parts—all welded connections mean safety. In case of fire, Foxboro recording gauges will not prove a source of danger—their parts will not give way to add fuel to the already embattled flames. High temperatures—high pressures can also be withstood better by these gauges—with the result that there is no danger of them letting go to spray hot fluids—on workmen nearby. Besides the safety feature, these steel spring gauges allow uninterrupted service—they will last longer under the most trying conditions.



FOXBORO ALL-STEEL CONSTRUCTION INCLUDES THREE WELDED JOINTS AS SHOWN ABOVE

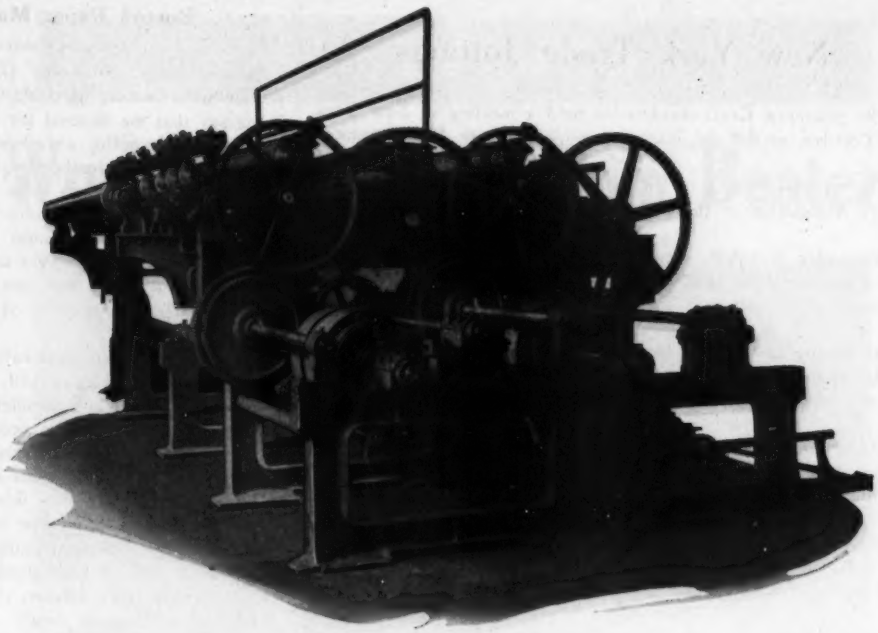
The Foxboro steel alloy movement is no longer in the experimental stage. During the past two years Foxboro has placed these steel welded movements on high pressure work in central stations, casing and tubing work in the natural gas field, cracking units in refineries, various processes in air reduction plants and on processes and in power plants in numerous other industries. The result has been that after continuous operation in the field the Foxboro Company has found its instruments equipped with these steel helicals to be accurate to within less than 1 per cent.

The alloy-steel movements may be specified with all new Foxboro recording gauges or may be ordered separate to be installed in old Foxboro recording gauges now in operation. The new movements are used on gas, water, steam, oil, air, brine, chemicals, etc.

With the introduction of this new gauge movement the Foxboro Company has prepared Bulletin 168 which describes these gauge movements in detail. Copies may be had by writing to them at Neponset avenue, Foxboro, Mass.

## Champion Moves St. Louis Office

ST. LOUIS, MO., November 17, 1930.—The Champion Paper Company, of Hamilton, Ohio, and the Champion Fibre Company, Canton, Ohio, removed their St. Louis sales office on November 8 to 1806 Arcade Building. John R. Aust, Jr., is manager of the office.



M & W Duplex Cutter, "DC" type. Used on end of paper machine up to 100 in.; or in finishing rooms up to 140 in.

# Accurate Sheet Sizes

PRINTERS are insistent on accuracy of the sheet sizes they handle. They have to be! Sheets out of square or wave-edged must be retrimmed before fine printing is possible. Sheets under size may cause rejection and possibly serious delay.

Retrimming is minimized where M & W Rotary Paper Cutters are used. The Moore & White Speed Change, by which the revolving knife is driven, controls the speed of the knife, and hence the sheet length, with a high degree of accuracy. It can be adjusted to cut any desired length, and will hold that length even at high speed.

Squareness of the sheet is assured by the heavy design and fine construction of the machine, and by the use of the well-known M & W Slitters for the lengthwise cuts.

*Write for full particulars.*

**THE MOORE & WHITE COMPANY**
*Established 1885*
15th ST. & LEHIGH AVE. PHILADELPHIA, PA.

# M&W CUTTERS *and* LAY BOYS

# New York Trade Jottings

The Southern Kraft Association held a meeting in New York on Tuesday, as did the National Sulphite Paper Manufacturers.

* * *

The weekly meeting of the New York Division of the Salesmen's Association of the Paper Industry was held on Tuesday.

* * *

Alexander Koroleff, secretary of the Woodlands Section of the Canadian Pulp and Paper Association, spent the week-end in town.

* * *

A meeting of the Cost Department of the American Paper and Pulp Association is to be held in Buffalo on the 20th and 21st of this month.

* * *

Major Oliver M. Porter, secretary-treasurer of the National Kraft Paper Manufacturer's Association, is visiting several mills on the West Coast.

* * *

Harry E. Fletcher, of Alpino, Mich., and Sydney T. Bailey, of Northampton, Mass., have been selected to represent the paper industry on the National Committee on Wood Utilization.

* * *

R. H. Kellogg, of the News Print Service Bureau, has just returned from the annual conference of the Harvard Economics Society, held in Cambridge last Friday and Saturday, at which national business conditions were discussed.

* * *

A conference of the New York State Economics Committee was held in Utica on Tuesday, at which land policies and taxation of forest lands were discussed. Charles W. Boyce, of the American Paper and Pulp Association, was present at this meeting.

* * *

The Caterpillar Tractor Company has just issued a booklet on the use of tractors in logging. By use of comprehensive pictures and text the subject is thoroughly covered, and the pamphlet brings out very clearly the possibilities for successful use of tractor logging in pulpwood operations.

* * *

Jesse H. Neal, general manager of the American Paper and Pulp Association, and Ernest Mahler, chairman of the Research Committee of the same organization, met on Tuesday with the Bureau of Standards. The meeting was held by this group in an attempt to co-ordinate the research activities of the various governmental bureaus.

* * *

The Paper Division of the Emergency Employment Committee of New York began work on Tuesday, under the direction of Hugh J. Chisholm, of the Oxford Paper Company. Each group in the industry is headed by a divisional representative, and is equipped with the necessary materials for the proper promotion of this drive to relieve the needy unemployed of Manhattan. Active efforts are going forward, and the committee, headed by Mr. Chrisholm, believes that the paper industry will willingly do its part in this commendable welfare campaign.

## W. G. Ferguson Goes With J. H. Horne & Sons Co.

William C. Ferguson, who has been connected for about six and a half years with the Kalamazoo Vegetable Parchment Company, Kalamazoo, Michigan, in charge of maintenance and construction, is now in charge of production of J. H. Horne & Sons Company, Lawrence, Mass. Mr. Ferguson, prior to his connection with the Kalamazoo Vegetable Parchment Company, was connected for many years with the Brown Company, Berlin, N. H., in the same capacity, and the Oxford Paper Company, Rumford Falls, Me.

## Boston Paper Market Fairly Active

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., November 17, 1930—Paper business in Boston is fair as a whole, particularly in view of general conditions. Some say that the demand for fine paper is more active than for a number of months, a fact which may possibly be taken as a forerunner of still further improvement. A considerable volume of seasonal orders seems to be in the offing in some quarters for 1931, especially from printers who need supplies in connection with work on stock, annual and town reports. As yet, the demand is spotty, but dealers are hopeful. The call for wrapping paper and specialties has increased over the last few months, and while the aggregate is of moderate size only, the trade is cheerful.

The box board market is rather sluggish, although some dealers say they are receiving a little business every day on all lines. At best, the demand is considerably below normal. Some of the important consumers have needed a smaller amount of supplies because of the smaller demand for commodities requiring containers. As "the bright spots in the New England shoe industry are few and far between," this condition is naturally reflected in a lessened demand for shoe boxes and boards for these boxes. Requirements of candy manufacturers have been less, so that the need for boxes for their product has been correspondingly less. It is generally felt, however, that the low point of the depression has been reached or nearly reached and that recovery is in sight, although it may be slow in coming. Prices of box board are unchanged here.

Conditions in the paper stock market continue quiet and are expected to remain quiet until after the turn of the year. Although it was felt that the bottom had been reached in values, prices of some grades of stock have declined. A downward tendency is noted particularly in bagging. As an instance, a house sells a carload of bagging, but for the next carload the consumer pays a lower figure.

## Plans for Manufacture of Coupon Bond

[FROM OUR REGULAR CORRESPONDENT]

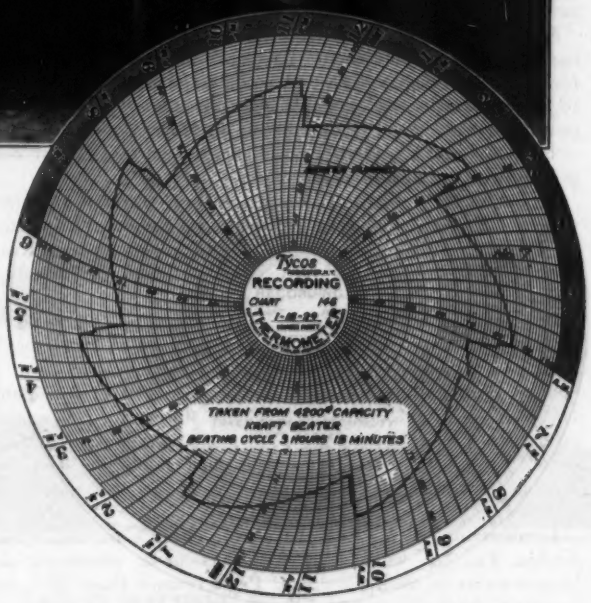
HOLYOKE, Mass., November 18, 1930—The manufacture of coupon bond paper in the building west of the Parsons Division will be begun the first of the year the American Writing Paper Company, Inc., announced this week. This mill which was formerly used as a laboratory will be renovated and equipped for the manufacture of the papers now being made at the Platner & Porter Division at Unionville, Conn. The equipment is to be transferred to Holyoke; and 300 men have been busy for several days preparing for its reception.

The building has been vacant since the laboratory was transferred to the Wauregan Division about two years ago. It was in this building that paper was first made 70 years ago, it being the oldest building yet standing in which that product was manufactured. The earliest paper mills in and about Holyoke were wooden structures where handmade paper was first made and have long since been destroyed. The water leases date back to 1856 the Mt. Tom Paper Company then owning the plant which was later bought by the Parsons Paper Company.

Preparation of the rags to be used will be carried on in the Parsons Division adjacent and transported through a tunnel. The bed for the machine has already been prepared in the rear of the mill.

The first floor will house the beaters and the entire two top floors will be used for loft drying. A refrigerating plant will be installed in connection with the filtering system. This is the final step in the rehabiliation program involving an expenditure of two and a half million dollars. The plant will use about 70 men when in full operation, some being brought from Unionville and the places of those who do not come being supplied by local help.

# ...On the World's 7 Largest Pulp Beaters




Photograph of one of the 7 largest pulp beaters in the world, located in a Northern paper mill, and chart record taken from one of the *Tycos* Recording Thermometers used on these beaters. The Instrument on the beater shown is not visible as it is placed on the back, conveniently close to the one that can be seen on the second machine, in the left background.

**THE operations of the 7 largest pulp beaters in the world—all located in one plant—are checked by *Tycos* Recording Thermometers.**

**These Instruments give the beater engineer a record of the time each beater was furnished and tell him approximately when it should be dumped.**

**A chart record written by the *Tycos* Recording Thermometer each day gives the mill manager an accurate history of the beating operation during the entire 24 hours.**

**As the trend in the modern beating room is toward greater capacities and higher circulating speeds, it is most important to keep an accurate check of temperatures. Excessive heat materially affects the character of the stock and makes it difficult to obtain the high degree of freeness often desired.**

**There are over 70 applications for *Tycos* Instruments in the Paper Industry. These include Industrial and Recording Thermometers, Pyrometers, Hygrometers and Hydrometers, Temperature, and Pressure Regulators, and Pressure and Vacuum Gauges.**

*Taylor Instrument Companies*

**Rochester, N. Y., U. S. A.**

**Canadian Plant** ***Tycos* Building, Toronto**

*Manufacturing Distributors in Great Britain, Short and Mason, Ltd., London—E. 17*

# *Tycos* Temperature Instruments

**INDICATING - RECORDING - CONTROLLING**

# CONSTRUCTION NEWS

*A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills*

### Construction News

**Cincinnati, Ohio**—The Seinsheimer Paper Company, York street and McLean avenue, has awarded a number of miscellaneous contracts for alterations and improvements in its plant, including painting, roofing and insulation, heating and ventilating, etc., and will push the work to completion. Estimated cost has not been announced. Carl J. Kiefer, Schmidt Building, Cincinnati, is architect and engineer.

**Rhinelander, Wis.**—The Rhinelander Paper Company is pushing work on new addition to its mill and has awarded a contract for roofing to the Federal Cement Tile Company, Chicago, Ill., for its new one-story mill unit now under way and for which general contract recently was let to C. R. Meyer & Sons, 50 State street, Oshkosh, Wis. The expansion is reported to cost over $45,000, with equipment.

**Brooklyn, N. Y.**—Standard Cartons, Inc., recently organized with a capital of $50,000, is said to be planning early operation of a local plant for the manufacture of paper containers and cartons. The company is represented by Egan & Ittelson, 2 Lafayette street, New York, attorneys.

**Bridgeport, Pa.**—The mill of the C. B. Daring Paper Manufacturing Company was slightly damaged by fire on November 9. An official estimate of loss has not been announced.

**Fort Wayne, Ind.**—The Fisher Brothers Paper Company, 118-20 West Columbia street, has plans maturing for a new plant unit, to be three-story and basement, 30x150 feet, reported to cost over $50,000, with equipment. It is understood that bids will soon be asked on general contract. A. M. Strauss, Cal-Wayne Building, Fort Wayne, is architect.

**Lambertville, N. J.**—The Parchment Paper Company, Philadelphia, Pa., has work nearing completion on alterations and improvements in the former local Perserverance Paper Mill, and expects to have the unit ready for operation in a short time. It will be given over to the production of grease-proof and other similar processed paper stocks.

**Pulaski, N. Y.**—The Regal Paper Company has arranged for an increase in capital from $150,000 to $400,000 for general expansion.

**Circleville, Ohio**—The Container Corporation of America is said to have preliminary plans under way for the rebuilding of the portion of its local strawboard mill, including storage and distributing facilities, recently destroyed by fire with loss reported at close to $100,000, including stock. It is understood that the building work will cost close to $45,000. Fire at the branch mill of the company on Nixon street, near Fountain street, Manayunk, Philadelphia, Pa., on November 10, caused a loss reported at about $18,000, largely confined to box-making machinery, and repair work and reconditioning will be placed in progress at once. Headquarters of the company are at 111 West Washington street, Chicago, Ill.

**Emeryville, Cal.**—The Paraffine Companies, Inc., San Francisco, are said to be arranging an expansion program, particularly in connection with the acquisition of other interests for increased operations in the domestic field; also, it is understood, that other developments will be carried out with regard to foreign subsidiaries for larger output at different mills. The company is reported to be arranging for financing for this expansion.

**Cincinnati, Ohio**—Fire recently damaged a portion of the plant and storage department of the Diem & Wing Paper Company, Eighth street and Eggleston avenue. An official estimate of loss has not been announced, but is reported as slight. The damage will be replaced.

**Menasha, Wis.**—The Menasha Paper Corporation, Menasha, has begun work on a new addition to mill, recently referred to in these columns, comprising a three-story structure, 48 x 96 feet, reported to cost more than $50,000, with equipment. It is proposed to have the unit ready for service at earliest date. General contract has been let to Anton Nielson, East Forest avenue, Neenah, Wis.

**Waterville, Me.**—The Hollingsworth & Whitney Company, Gardner, Me., has work under way on proposed new steam power plant at its mill, to be one-story, estimated to cost close to $40,000, with equipment. A list of apparatus to be installed has been arranged. Charles T. Main, Inc., 201 Devonshire street, Boston, Mass., is architect and engineer.

**Enka, N. C.**—The American Enka Corporation, Enka near Asheville, N. C., is developing maximum output at its cellulose mill for rayon production, and is now giving employment to about 2500 operatives on a full time basis. It is expected to continue on this schedule for an indefinite period. The company is developing its local mill village and work will soon be placed under way on a new school unit for children of operatives.

**Indianapolis, Ind.**—Beach & Arthur, Inc., 221 West South street, manufacturer of paper products, has awarded a number of miscellaneous contracts for work in connection with its new mill to be located at 2900 Columbia avenue, as previously referred to in these columns. The unit will be one-story and basement, 200 x 300 feet, with one-story office building adjoining, 60 x 60 feet, and is reported to cost approximately $80,000, with equipment. Contracts have been let to local interests for roofing, painting, plumbing and electrical installation. The general award is being carried out by Harry Fitton, 958 North Pennsylvania street, who is also architect for the structures.

**Westfield, Mass.**—The Lockwood Envelope Specialties, Inc., Westfield, organized with a capital of 1,000 shares of stock, no par value, as announced in these columns last week, will operate in the local building of the United States Whip Company on Main street, where ground floor has been acquired for paper converting service and production of envelopes, etc. A sizable production schedule will be arranged. Ray L. Lockwood, head of the new organization was formerly an official of the Old Colony Envelope Company, with local mill.

**New York, N. Y.**—The Container Machinery Corporation, 220 Broadway, has arranged for an increase in capital from $10,000 to $60,000, for general expansion.

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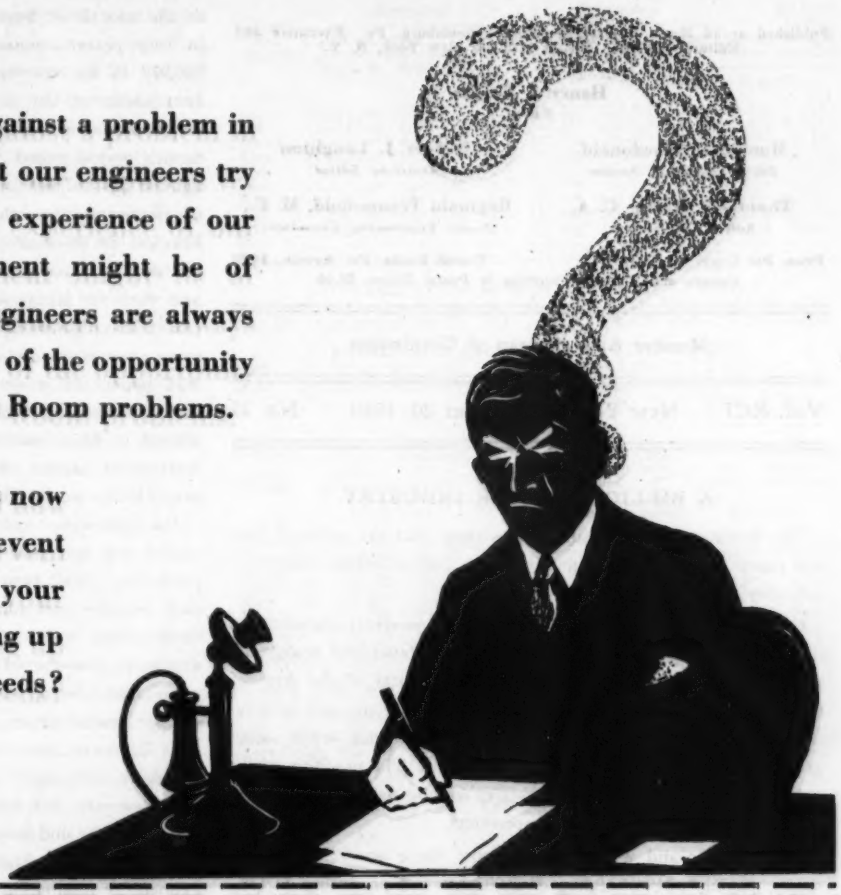

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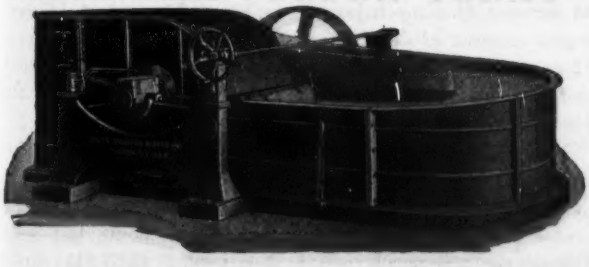

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## A BILLION DOLLAR INDUSTRY

The latest available census figures show that the value of pulp and paper manufactured annually in the United States totals considerably over $1,000,000,000.

For census purposes, the paper and paper products classification is divided into two definite subgroups, (1) Paper and wood pulp and (2) manufactures of paper. The products of the first of these subgroups become the materials for the second, and as a result there is necessarily a large amount of duplication in the value-of-products figures for the group as a whole. The products of the industries in the second subgroup are, for the most part, commodities known as converted paper products.

In the paper and wood pulp industry, there are 929 establishments, paying wages totaling $162,002,000 and producing $1,138,090,000 worth of commodities annually, while there are 2,060 establishments making paper products, and their annual output is valued at $661,690,000 and their wages total $111,569,000 a year.

The number of establishments, wages paid, and value of products for the various industries in the two classifications are shown in the following table:

| Industry | Number of establishments.* | Wages | Value of products |
|---|---|---|---|
| Paper and Wood Pulp | | | |
| Paper | 710 | $130,475,000 | $919,891,000 |
| Pulp (wood and other fiber) | 219 | 31,527,000 | 218,198,000 |
| Manufacturers of Paper | | | |
| Bags, paper, exclusive of those made in paper mills | 88 | 6,394,000 | 57,490,000 |
| Boxes, paper and other, not elsewhere classified | 1,219 | 57,701,000 | 306,555,000 |
| Card cutting and designing | 60 | 2,707,000 | 16,871,000 |
| Cardboard, not made in paper mills | 9 | 849,000 | 5,581,000 |
| Envelopes | 153 | 10,755,000 | 56,006,000 |
| Labels and tags | 121 | 8,000,000 | 34,398,000 |
| Paper patterns | 17 | 1,418,000 | 13,782,000 |
| Paper goods, not elsewhere classified | 340 | 17,765,000 | 140,948,000 |
| Wallpaper | 53 | 5,981,000 | 30,059,000 |

*Note: The number includes only establishments engaged primarily in the manufacture of the products covered by the industry title.

The foregoing figures were taken from the biennial Census of Manufactures Report for 1927. This book which contains detailed and comparable figures on all paper and paper products and other industries, can be obtained from the Superintendent of Documents, Washington, D. C., for $2.25.

## FOREIGN PAPER TRADE DECLINES

Exports of paper and paper products from the United States in the month of September reached the lowest level recorded in two years, amounting to only $2,298,076, as against $2,986,977 in the corresponding month of 1929 and falling 7 per cent short of the preceding month's total according to the Paper Division of the Department of Commerce. For the nine month period ended September 30, they totaled $23,893,009, as against $27,852,589 for the same period last year. The majority of items on the schedule shared in this decrease, with the heaviest declines as follows: Wall board of paper or pulp, 55 per cent, surface coated papers, 32 per cent, new print, boxes and cartons, fancy writings and bristol and bristol board, 25 per cent, vulcanized fiber sheets, strips, rods and tubes, 22 per cent, over issue and old newspapers, 19 per cent, paper bags wall paper and other paper board, approximately 16 per cent, and book paper, 9 per cent. The only notable increases occurred in fiber insulating lath or board and greaseproof and waterproof papers which gained 125 per cent and 32 per cent, respectively in the nine-month period.

The following wide fluctuations are apparent between this year's and last year's September exports of paper and paper products: Wall board of paper or pulp, 64 per cent decrease, cash register and adding machine paper, 52 per cent decrease, other paper board and other writing paper, each 46 per cent decrease, greaseproof and waterproof papers, 45 per cent increase, over-issue and old newspapers, 42 per cent decrease, surface coated papers, 33 per cent decrease, news print, 30 per cent decrease, fiber insulating lath or board, 40 per cent increase, cover paper and tissue and crepe paper, each 38 per cent decrease, vulcanized fiber sheets, strips and tubes, 23 per cent decrease and bristol and bristol board 20 per cent decrease.

The following high increases are noted in the September exports as compared with those of the previous month: Cash register and adding machine paper, 65 per cent, fancy writings, 40 per cent, fiber insulating lath or board, 23 per cent. Heavy losses occurred in sheating and building paper, which dropped 52 per cent, surface coated paper, which declined 44 per cent, and wall papers, which were 36 per cent lower than in the previous month.

The total exports of paper base stocks in September amounted to $128,436, which represented a 22 per cent decrease as compared with the preceding month and a 55 per cent decrease as compared with the corresponding month last year. During the nine-month period they totaled $3,474,833, which was a 14 per cent decrease over the same period last year. Pulp wood exports in this period registered a gain of 205 per cent, but heavy losses were sustained in exports of all other paper base stocks. Rags and other paper stocks, which have declined considerably in the previous months of the year were 13 per cent higher in September as compared with August shipments, but were still 35 per cent lower than a year ago. Sul-

phite wood pulp exports decreased in September 37 per cent as compared with August and 53 per cent as compared with September, 1929.

Imports of paper and paper products in September amounted to $10,050,173, representing a slight increase over the preceding month's record, but falling 16 per cent below the corresponding month's shipments last year. During the nine-month period ended September 30, they totaled $109,721,086, as against $118,796,313 in 1929. September imports of news print were somewhat higher than those of August, but 13 per cent lower than what was recorded for September, 1929. A total of $97,443,529 represented our news print imports during the nine month period, as compared with $104,748,669 in the corresponding period last year. A decrease occurred in the value of consignments from Canada, while notable increases occurred in our imports of this commodity from Norway, Sweden, Finland and Germany, during the nine month period. Incoming shipments of writing and drawing paper, leather board, test and wall board, and cigarette paper, cigarette books and covers were heavy in the first nine months, as compared with those of last year in the corresponding period, while imports of the following sustained heavy losses: Kraft wrapping paper, other wrapping papers, surface coated papers, tissue and similar papers, pulp board in roll, paper board, pulp board and card board, wall paper, duplex, decalcamania paper, unprinted and paper boxes. September imports of the following items fell not only considerably below the preceding month's record, but were also far behind last year's figures for the same month: Paper boxes, surface coated paper, writing and drawing paper, Kraft wrapping paper, other wrapping papers, papier mache and pulp manufacturers. Increases over August imports are noted in duplex, decalcamania paper, unprinted, cigarette paper, cigarette books and covers, leather board, test and wall board, paper board, pulp board and card board, pulp board in rolls and in tissue and similar papers not weighing over six pounds to the ream.

Total imports of paper base stocks in September amounted to $9,370,307, which was a slight increase over the preceding month, but was $1,116,759 less than in September, 1929, whereas, the nine month period also witnessed a rather large decline in our imports of these products, as compared with 1929. Imports of peeled spruce increased 37 per cent during this period, and there were also slight increases in other peeled and sulphite wood pulp, bleached.

## Swedish Pulp Exports Decrease

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 12, 1930.—A report from Acting Commercial Attache Matheson, at Helsingfors states that production in the Swedish pulp and paper industry was unchanged during the third quarter, although it is possible that reductions will take place during the last three months of the year.

Chemical pulp exports, says the report, during September amounted to 38,045 metric tons, or a decrease of about 6,300 tons compared with the corresponding period of last year. Paper shipments during the same month totaled 20,593 tons compared with 19,287 tons during September last year. For the nine months period ending September 30, chemical pulp shipments amounted to 329,660 tons, a reduction of 4,800 tons compared with last year while paper shipments of 189,694 tons showed an increase of 15,592 tons. Of the wood pulp shipments 253,624 tons represented sulphite and 76,036 tons of sulphate pulp.

## Box Board Production for September

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 12, 1930.—September production of box board, based on reports to the Bureau of the Census by 97 firms operating 130 plants, was 71.0 per cent of capacity, as compared with 67.6 per cent in August, 78.6 per cent in September, 1929, and 77.2 per cent in September, 1928. The capacity data shown below vary according to the normal number of working days in each month:

| Year and Month | Operation: Inch hours Capacity | Operation: Inch hours Operated | Operation: Per cent of Capacity | Production: Short Tons Capacity | Production: Short Tons Output | Production: Per cent of Capacity | New Orders Short Tons | Unfilled Orders (end of month) Short Tons |
|---|---|---|---|---|---|---|---|---|
| 1930 | | | | | | | | |
| Jan. | 11,691,264 | 8,772,273 | 75.0 | 329,628 | 236,344 | 71.7 | 244,536 | 69,940 |
| Feb. | 10,888,704 | 8,971,760 | 82.4 | 306,432 | 221,014 | 72.1 | 213,251 | *62,204 |
| March | 11,796,096 | 8,643,344 | 73.3 | 331,968 | 229,979 | 69.3 | 226,770 | 58,591 |
| April | 11,796,096 | 8,580,845 | 72.7 | 331,968 | 245,167 | 73.9 | 249,848 | *67,000 |
| May | 11,796,096 | 8,377,741 | *71.0 | 331,968 | 240,186 | 72.4 | 234,405 | 63,237 |
| June | 11,342,400 | 7,841,532 | 69.1 | 319,200 | 221,525 | 69.4 | 221,526 | *59,427 |
| July | 11,796,096 | *7,892,964 | *66.9 | 331,968 | *222,788 | *67.1 | *230,884 | *66,400 |
| Aug. | 11,796,096 | *8,029,756 | *68.1 | 331,968 | *224,391 | *67.6 | *222,372 | *64,050 |
| Sept. | 11,342,400 | 7,133,989 | 62.9 | 319,200 | 226,724 | 71.0 | 227,252 | 62,576 |
| Total 9 mos. | 104,245,248 | 74,244,204 | 71.2 | 2,934,300 | 2,068,118 | 70.5 | 2,070,844 | ..... |
| CORRESPONDING MONTH OF PREVIOUS YEARS | | | | | | | | |
| Sept.'28 | 11,206,368 | 8,644,556 | 77.1 | 299,736 | 231,324 | 77.2 | 242,028 | 89,907 |
| Sept.'29 | 11,251,056 | 8,745,015 | 77.7 | 307,776 | 242,032 | 78.6 | 244,553 | 85,866 |
| TOTALS FOR PREVIOUS 9 MONTH PERIODS | | | | | | | | |
| 1928 | 107,367,660 | 78,112,051 | 72.8 | 2,871,970 | 2,042,374 | 71.1 | 2,055,719 | ..... |
| 1929 | 107,779,420 | 82,779,894 | 76.8 | 2,947,170 | 2,261,811 | 76.7 | 2,245,618 | ..... |

| Year and Month | Shipments of boxboard Short Tons | Stocks of boxboard, end of month Short Tons | Consumption of waste paper: Capacity Short Tons | Consumption of waste paper: Consumed Short Tons | Per cent of Capacity | Stocks of waste paper end of month: At plants Short Tons | Stocks of waste paper end of month: In transit and unshipped purchases Short Tons |
|---|---|---|---|---|---|---|---|
| 1930 | | | | | | | |
| January | 232,284 | 66,498 | 318,786 | 223,288 | 70.0 | 180,055 | 54,142 |
| February | 220,987 | *66,525 | 296,429 | 216,717 | 73.1 | 179,497 | 54,577 |
| March | 229,325 | 67,492 | 321,126 | 229,909 | 71.6 | 192,957 | 54,629 |
| April | 241,458 | 72,071 | 321,126 | 230,993 | 71.9 | 181,125 | 51,950 |
| May | 238,079 | 74,908 | 321,126 | 232,581 | 72.4 | 185,972 | 34,919 |
| June | 225,336 | *71,097 | 308,775 | 210,793 | 68.3 | 184,451 | 38,241 |
| July | *223,427 | *70,601 | 321,126 | *207,596 | *64.6 | *175,645 | 43,393 |
| August | *224,141 | *71,900 | 321,126 | *215,879 | *67.2 | *187,508 | *36,108 |
| September | 228,387 | 69,589 | 308,775 | 221,534 | 71.7 | 165,226 | 46,380 |
| Total 9 mos. | 2,063,424 | ..... | 2,838,395 | 1,989,290 | 70.1 | ..... | ..... |
| CORRESPONDING MONTH OF PREVIOUS YEARS | | | | | | | |
| Sept. 1928 | 236,004 | 47,788 | 287,928 | 223,009 | 77.5 | 120,857 | 53,354 |
| Sept. 1929 | 245,957 | 59,364 | 294,504 | 231,029 | 78.4 | 175,279 | 87,700 |
| TOTALS FOR PREVIOUS 9 MONTH PERIODS | | | | | | | |
| 1928 | 2,040,066 | ..... | 2,758,510 | 1,896,548 | 68.8 | ..... | ..... |
| 1929 | 2,256,279 | ..... | 2,820,280 | 2,132,115 | 75.6 | ..... | ..... |

* Revised.

## Paper Troubles in Lithographic Plants

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 19, 1930—A preliminary survey of papers and paper troubles in lithographic manufacturing plants has been completed by the Paper Section of the Bureau of Standards. Representatives of thirty-six different firms have been interviewed. During the past month fourteen different firms located in Cincinnati, Ohio, Buffalo, New York, Rochester, N. Y., Philadelphia, Pa., New York City and Boston, Mass., were visited. As a result of these conferences the following conclusions have been drawn.

The censensus of opinion among lithographers is that misregister of the design being printed is the principle difficulty which they encounter. Other troubles are variation in time of drying of printing ink, picking and linting of surface of paper, and variation in clearness of design presumably caused by variation in the printing surface.

An outline of the research to be begun immediately has been prepared. Plant problems will be taken up first. Arrangements are being made to carry out tests in a commercial press room for the purpose of determining factors which produce misregister. Knowing these factors research can then be initiated to bring about their elimination.

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Section of the
Technical Association of the Pulp and Paper Industry
Edited by Ronald G. Macdonald, Secretary

# An Improved Schopper-Riegler Freeness Consistency Chart

By D. S. Davis[1]

Korn [2] has prepared a chart for use with the Schopper-Riegler beating and freeness tester which enables correction of the beating degree to the standard consistency of 2 grams bone-dry pulp per liter. This chart, a plot of beating degree against bone-dry sample weight in grams, resembles Fig. 1 closely except that Korn's curves are made to pass exactly through the circled points and are caused to converge at the theoretical point, 4.5 degrees and zero consistency, which is determined by conducting a "blank" test with water alone.

To convert a beating degree of 46 determined at a consistency of 2.5 grams per liter to the standard 2 grams per liter one is directed to plot the point (2.5, 46) on the chart and to draw from this point to the 2 gram line a curve which shall be "parallel" to the nearest charted curve, yielding 40.5 as the corrected beating degree or the value which would have been obtained had the test been made at the standard consistency. In view of the changing curvature of the lines it is a little difficult to decide just what constitutes a "parallel" curve and on this point two operators can not be expected to agree exactly.

It is evident that if the nature of the data will permit the plotting of functions such that the curves become straight lines, the new straight-line chart will greatly facilitate correction of beating degree to the standard consistency. It is the purpose of this paper to present such a chart.

Fig. 1 carries at the left a beating degree scale, s, and at the right a freeness scale, S. Beating degree, from Mahlungsgrad, the German term given the Schopper-Riegler test value, denotes one-tenth of the difference between 1000 and the volume of free water, S, in milliliters, while "freeness," S, is employed here in the sense familiar to users of American freeness testers.

Korn's data, indicated by the circled points in Fig. 1 and obtained from Table A of his paper [2] suggest that the curves may be hyperbolic and convergent at the point w = 0, s = 4.5 or S = 955 according to the equations,

$$\frac{100}{100-s} = K\,w + a \qquad (1)$$

and

$$\frac{1000}{S} = K\,w + a \qquad (2)$$

where w is the consistency in grams of bone-dry pulp per liter, K is a constant for each pulp sample and

$$a = \frac{100}{100-4.5} = \frac{1000}{955} = 1.047$$

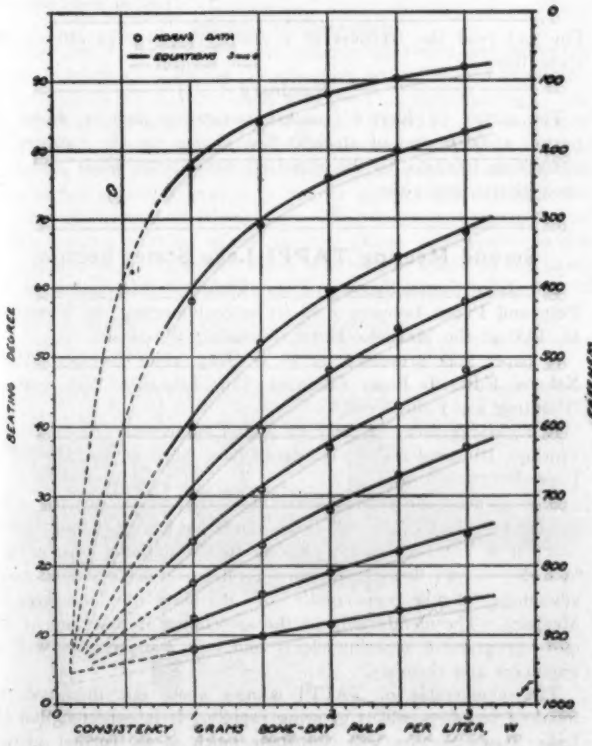



FIG. 1

[1] Junior Member, TAPPI, Staff Mathematician, The Mead Corporation, Chillicothe, Ohio.

[2] Korn, Wochenblatt fur Papierfabrikation No. 7, (1929); Zellstoff u. Papier, 9, 154 (1929); Paper Industry, II, 347 (1929); World's Paper Trade Review, May 16th, 1930; Schopper Leaflet No. 400.

The equations are quite satisfactory for the more free pulps, but values calculated by them diverge somewhat from the data in the case of the slower pulps. As a whole better results are obtained if the point $w = 0.1$, $s = 4.5$ or $S = 955$ is chosen as the convergence point, in which case the equations become,

$$\frac{100}{100 - s} = K(w - 0.1) + 1.047 \qquad (3)$$

$$\frac{1000}{S} = K(w - 0.1) + 1.047 \qquad (4)$$

and the curves calculated by these equations become those of Fig. 1. Comparison of the calculated curves with Korn's data indicates that a chart built upon Equations (3) and (4) should be satisfactory over a consistency range of 1.5 to 2.5 grams per liter and could be used, in an emergency, between 1 and 3 grams per liter.

Such a chart is given in Figs. 2 and 3 where the ordinates are proportional to 100/(100—s) and to 1000/S instead of to s and to S as in Fig. 1, thus allowing the hyperbolas to be plotted as convergent straight lines. The use of the conversion charts is illustrated as follows: Given a beating degree of 46 determined at a consistency of 2.5 grams per liter, what is the value of the beating degree at the standard consistency? Using Fig. 2 start at the left side of the chart and follow the 46 line horizontally to its intersection with the 2.5 gram line and interpolate the beating degree at 2 grams per liter between the slant lines as 40.6. Given a freeness of 240 ml. at 1.7 grams per liter what freeness value would have been obtained at 2 grams per liter? Using Fig. 3 and starting at the right side of the chart follow the 240 line horizontally to the 1.7 gram line and read the freeness at 2 grams per liter as 210 on the slant line.

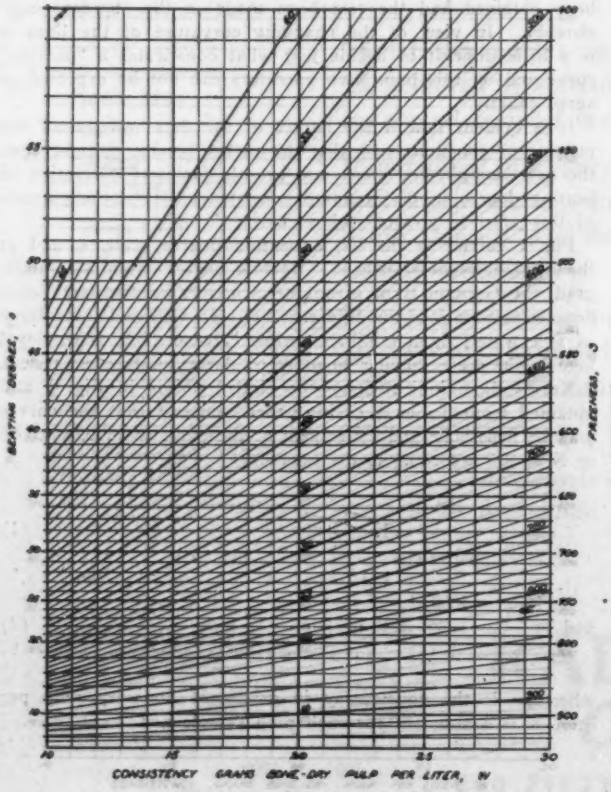



FIG. 2

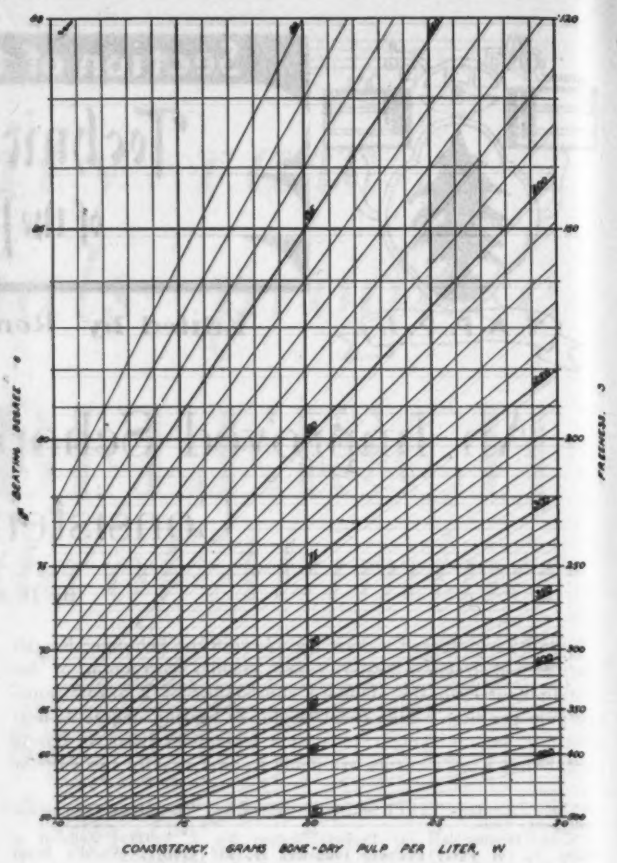



FIG. 3.

### Summary

The nature of Korn's freeness-consistency data is shown to permit construction of straight line charts for the purpose of correcting freeness to the standard consistency basis and two such charts are given.

## Second Meeting TAPPI Lake States Section

The Lake States Section of the Technical Association of the Pulp and Paper Industry held its second meeting on November 11, 1930 at the Menasha Hotel, Menasha, Wisconsin.

A paper was presented by F. G. Kilp, chief forester of the Nekoosa-Edwards Paper Company, Port Edwards, Wis., entitled "Planting for Pulp Wood."

A. E. Montgomery of the J. O. Ross Engineering Corporation of Chicago, Ill., read a paper entitled "New Ideas in the Drying of Paper."

The spontaneous interest that has been shown by the local members of TAPPI as well as by others has been very gratifying. Since it is not necessary to belong to the national organization in order to join the section many local paper makers have taken advantage of the opportunity of attending the meetings in Menasha. The membership of the association is made up of the more progressive superintendents and mill managers as well as engineers and chemists.

The membership of TAPPI is now about one thousand two hundred members and is growing rapidly. It is expected that the Lake States Section will contribute much to its further growth and prestige in the industry.

# The Thyle Consistency Control*

By H. L. Rammer[1]

A discussion of the benefits of regulated consistency is almost platitudinous; those sufficiently interested in a paper on this subject are, by the same token fully aware of the advantages of constant stock consistency. The number and variety of devices for this purpose that have appeared on the market, particularly in the last few years, are an indication of the importance of this problem.

Slush pulp could hardly be termed a viscous liquid, yet it must be treated as such in controlling its consistency and the operation of most regulators is based on this apparent viscosity. The Thyle control differs from the usual type of regulator in much the same way that the Stormer viscosimeter differs from the regular orifice type apparatus. The Thyle control accomplishes its results by rotating a smooth cylinder at a constant speed in a tank or pipe line through which the stock is moving. Viscosity has been defined as "the shear modulus of the liquid." The rotating cylinder carries a sheared film of liquid around its periphery; the solids do not come in contact with it. It is the interference to the free movement of this shear zone by solids that produces the variations in torque required to rotate the cylinder at constant speed.

The control utilizes the well known mechanical law, "Action and reaction are equal and opposite" and reacts to these variations in torque. The cylinder is rotated by a ¼ h.p. motor so positioned on its base that the center of gravity is above the center line or axis of the cylinder shaft; hence the torque exerted in rotating the cylinder tends to overbalance the motor. This tendency is counter balanced by means of weights hung on a flexible steel strap fastened to the top point of the rim of a flange provided on the motor base (Fig. 1). The consistency of the stock is adjusted or varied by simply changing the weights on the steel strap.

### Method of Operation

The motor base, motor and supporting sleeve are mounted on ball bearings, allowing the assembly to swing in a small arc. The cylinder or resistor shaft also runs on ball bearings. On the motor base are fixed two mercury switches. If the stock consistency just compensates for the weight added, the motor balances itself on dead center. Should the consistency increase the motor assembly moves in its arc in the direction opposite to that of rotation of the resistor. This movement closes one of the mercury switches which in turn closes a magnetic switch opening a motor operated valve which adds water to the stock at some convenient point back of the regulator. A decrease in consistency moves the motor assembly to the other side causing the water valve to close. Both movements are indicated by colored lamps; a green light shows that the stock is heavy and water is being admitted while a red lamp indicates that the stock is thin and the water valve is closing. A continuous burning of the red lamp informs the operator that the stock is too thin for regulation. Obviously the stock to be regulated must be heavier than the consistency desired. With neither lamp burning the operator is informed that the consistency is exactly right and the valve is admitting just enough water to maintain it so. Under ordinary conditions the regulator, when first put in operation, will hunt for the first few minutes and gradually

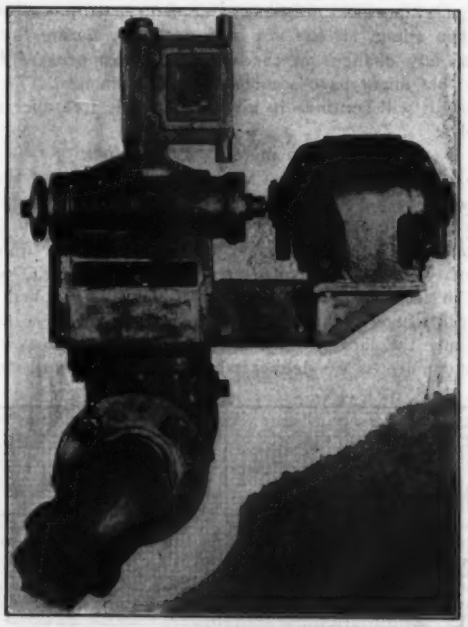


FIG. 2
Thyle Valve

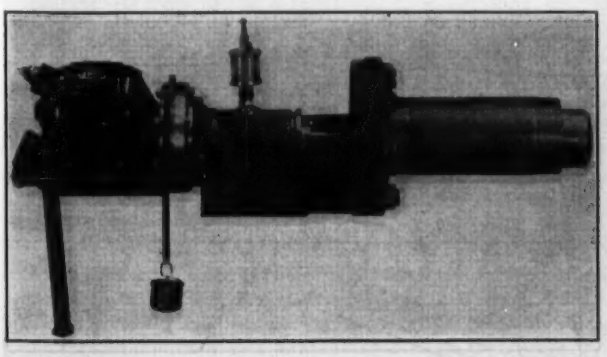


FIG. 1
Thyle Control.

FIG. 3
Installation showing control and valve on chip stock

* Patents applied for in U. S. and foreign countries.

[1] Member TAPPI, Chief chemist, Fibreboard Products Company, Stockton, Calif.

and automatically determine the proper opening for the water valve. The regulator will then tend to remain balanced and only occasionally open or close the valve.

It may occur to many as it occurred to us, that an electrically operated system such as this containing mercury switches and a magnetic reversing switch will give more trouble than a mechanically operated device. The regulator has been in operation here for two years and at no time did we experience any difficulty with the electrical equipment. Our troubles and development work were confined solely to the mechanism of the control itself. As this is being written the control has been in operation continuously for five weeks (except for Sunday shutdown) on chip stock and has required no attention whatsoever other than oiling. It has not been necessary during the period to make any changes in the weights to compensate for any changes that might have occurred in the mechanism. To all appearances it will continue to give this trouble free operation indefinitely.

### Variations in Velocity of Stock

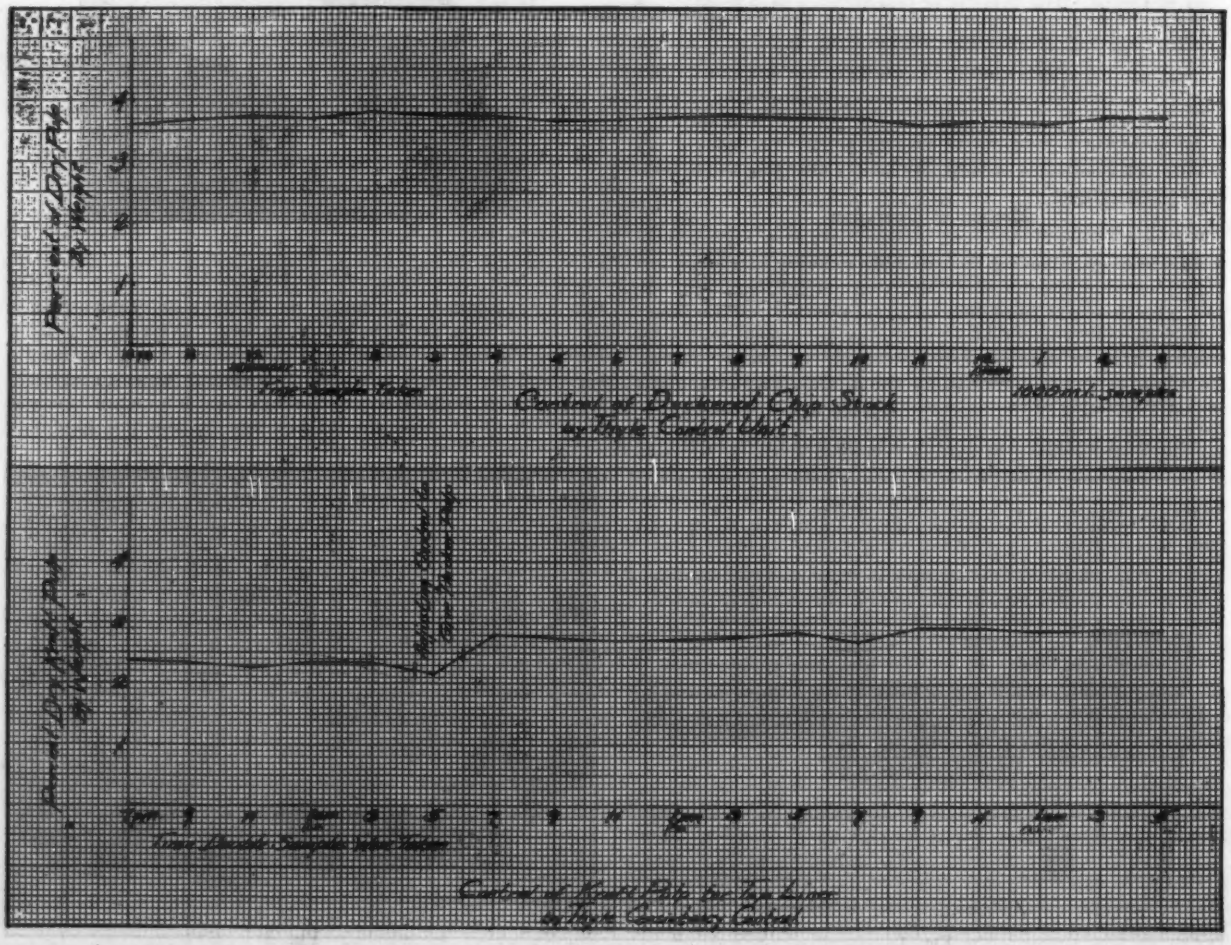
It will be pointed out that variations in velocity of the stock will have a marked effect on the accuracy of this sort of device. This was our opinion and we tended to attribute all our development difficulties to this one factor but we later found that the velocity effect was compensated for automatically. The Thyle control in use here is mounted in a 10 inch line supplied by two 7 inch centrifugal pumps; ordinarily only one pump is in operation. Since the capacity of a centrifugal pump increases as the consistency drops, we deliberately thinned the stock during a test until its velocity had greatly increased yet the control swung to the valve closing position. There is no doubt that the increased velocity exerted an effect of higher consistency but the reaction to the thinner stock more than overbalanced this velocity effect. As another test the second pump was cut in with the stock at its usual consistency and under these conditions the regulator definitely admitted too much water because of the increased velocity. However, it was only necessary to add about 150 grams additional weight to the strap to compensate for this, and the regulated stock returned to the desired consistency with both pumps in operation.

### An Important Feature

The Thyle control has one feature—and an important one—that, to the writer's knowledge, is not possessed by any other regulator on the market. Rags, strings and any foreign material in the stock cannot interfere with its operation. The resistor being a smooth cylinder, 50 inches in diameter and 10 inches long, cannot catch and retain these materials. That portion of the resistor shaft running in the stock proved to be a most excellent rag and string catcher in the first tests made with the control. This was remedied by the use of a sleeve covering the shaft and extending into a recess in the resistor. With this addition no further difficulty was ever experienced with extraneous materials.

### Reliability of Regulator

As to the accuracy of this regulator, the first demonstrations we had of the device were sufficiently convincing on this point. A study of the control by any one familiar with principles in-



volved is equally as convincing. We have a 12 hour record of hourly samples of stock in which the difference between the maximum and minimum consistency during that period was .04 per cent. This is admittedly unusually good operation and could not be maintained over long periods but it is an indication of what the control can do. The manufacturers guarantee to maintain the consistency within .1 per cent either side of the desired value.

Maintenance and repairs on this control can be considered negligible. With the exception of one mercury switch, no repairs or replacements were ever necessary; the mercury switch referred to was cracked by rough handling. The motor valve which was designed and produced rather hastily by the Thyle Machinery Company after nothing suitable could be found on the market, was expected to be a source of trouble. Its rugged sturdy construction plus what proved to be an excellent design, caused us to forget there was a dilution valve in the control system. Those parts in the control subjected to wear are easily and cheaply replaced and it is well to note that what gradual wear occurs does not require any compensating adjustments nor does such wear in any way affect the sensitivity or accuracy of the control.

Automatic control that will eliminate guessing and rule of thumb methods from the maintenance of such important qualities as weight and caliper in paper and board is certainly a distinctly progressive step in mill operation. The Thyle Control with its marked superiority over any similar device merits the consideration of all who can be benefited.

# Current Paper Trade Literature

## Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts and Bibliography of the Technical Association of the Pulp and Paper Industry

Clarence J. West, Chairman

**For photostatic copies of articles appearing in the Abstract Section, address the chairman of the Abstracts Committee, Dr. Clarence J. West, National Research Council, 21st and B Streets, Washington, D. C. The charge for this service is 25 cents per page. Copies of United States patents may be obtained from the U. S. Patent Office, Washington, D. C., for 10 cents each. Send currency, not stamps.**

### Paper Machine

**Process and Apparatus for Making Paper.** Melvin R. Ware. U. S. pat. 1,732,176, Oct. 15, 1929.—In the construction described the paper is formed directly on a suction roll, either by flowing the stock on to the roll or by partially immersing the roll in a stock vat. Instead of a single suction couch, two rolls (the first being a suction roll) are provided inside the loop of the wire near its delivery end, the first being placed some distance away and at a higher level than the end roll. Between them, on the upper side of the wire, is a roll of about the same size, or slightly larger, which picks the sheet off the wire, this action being assisted by a small roll which presses the wire against the large one. It is claimed that with this construction the paper can be sent directly from the wire to the dryers, without passing through the usual presses; and that any grade from tissue to paper board can be made without any material change in the machine, with the single exception of vat-lined papers, which require some supplemental devices.—A.P.-C.

**Device for Controlling the Consistency of Pulp.** George E. Mayo. U. S. pat. 1,726,749, Sept. 3, 1929.—An air container, or air-trap, is suspended in a constant-level stuff box, so that an unchanging body of air is trapped by the pulp and compressed to an extent depending on the consistency of the pulp. The top of this container is connected by a pipe to a diaphragm chamber operating a valve in the line through which dilution water is furnished to the pulp leaving the stuff box, in such a manner as to reduce the quantity of dilution water when the consistency falls and to increase it when the consistency rises, so that the pulp discharged from the stuff box is always at a constant predetermined consistency. A pressure gauge is mounted on the air container and communicates with the interior thereof; it may be calibrated to accurately indicate the consistency of the pulp in the stuff box, since the pressure in the container is dependent on the consistency of the pulp.—A.P.-C.

**Removable Fourdrinier Paper Machine.** Herman L. Kutter assignor to The Black-Clawson Co. U. S. pat. 1,729,350, Sept. 24, 1929.—The table frame is divided into two or more sections. Each section is provided near each end with carriage and supporting means by which it is supported from the floor. The carriages on the front side of the machine rest directly on the floor, and are provided with flanged wheels which run in grooved tracks in the floor; the tracks and the wheel flanges are preferably provided with co-operating gear teeth, and suitable means are provided for driving the wheels so that the sections can be rolled forward from their normal operating position. The carriages on the rear side of the machine are supported on rails extending transversely of the machine. During normal operation, the several sections of the table are locked in place. In order to change a wire the breast roll is removed from its normal position and suspended from the table-roll frame, if a dandy roll is used it is removed, the sections are unlocked and rolled out forwards, the old wire is removed (this may be done before rolling out the table if desired) the elevated rails supporting the rear carriages are pulled back (the rear carriages resting meanwhile on pedestals at the front side of the machine the new wire is passed around the couch roll and strung in position suspended on temporary supports, the table sections are rolled back into normal position, the temporary wire supports are removed and the breast roll is returned to its normal position.—A.P.-C.

**High Speed Paper Machines.** S. Richardson. Chas. Walmsley & Co., Ltd. World's Paper Trade Rev. 93, 828-832 (March 7, 1930).—A discussion of the manner in which paper machines have been adapted to the present-day speed and width requirements.—A.P.-C.

**Preventing the Formation of Air Bubbles Between the Sheet and the Felt at the Presses of Paper Machines.** Alois Danninger and Richard Kastner. Fr. pat. 665,034.—Air or steam is blown on to the sheet across its full width, a short distance in advance of the nip of the press. Alternatively, air or steam may be blown from underneath against the felt, so as to raise the paper slightly off the felt, thus permitting the air between the felt and paper to escape laterally.—A.P.-C.

**Removable Press Part for Paper Machines.** George H. Harvey assignor to The Black-Clawson Co. U. S. pat. 1,736,400, Nov. 19, 1929.—The frame on the front side of the machine has an opening opposite each press, of sufficient size to permit the press rolls being removed through it. The supporting standards on each side of the opening in the frame are grooved to receive a removable block which carries a bearing standard for the lower press roll. The upper press roll is supported in bearings in

a pair of bellcrank levers provided with suitable mechanism for varying the pressure between the rolls. Suitable tracks are provided under each press, and passing through the opening in the side frame. In order to remove a press (e.g., in changing a felt) the bearing caps of the lower roll bearings are removed, steel straps are looped over the projecting journals of the two rolls at each end, the upper roll is raised so as to raise the lower one clear of its bearings, the portion of the felt beneath the lower press roll is pulled out through the frame opening and raised over the end of the lower press roll, a suitable truck is run over the tracks under the roll, which is then lowered and taken out after removing the steel straps holding it to the top press roll.—A.P.-C.

**Device for Automatically Transferring a Lead Strip from the Second Press to the Reversing Press and Thence to the Dryers.** Robert E. Read assignor to International Paper Co. U. S. pat. 1,734,879, Nov. 5, 1929.—The lead strip is removed from the delivery end of the second felt by means of an air blast which blows it on to the upwardly travelling stretch of the third felt, and is maintained in contact with it by additional blasts. After passing through the third press, the end of the lead strip is blown into engagements with a rope carrier which automatically threads it through the dryers.—A.P.-C.

**Press-Cylinder Cleaner.** Walter K. Mick assignor to Brown and Bigelow. U. S. pat. 1,744,913, Jan. 28, 1930.—The doctor of the press roll is connected to a collecting trough along its lower edge in such a manner as to form a smooth, liquid-tight joint.—A.P.-C.

**Suction Press Roll for Paper Making.** George D. Kilberry assignor to Downington Mfg. Co. U. S. pat. 1,723,181, Aug. 6, 1929.—The holes in the shell of the roll are arranged in rows which are equally spaced circumferentially. The holes in the several rows are equally spaced and are relatively staggered with respect to the adjacent rows. The holes of each row slightly overlap the extent of the holes of adjacent rows. The holes are located at the apexes of contiguous rhombs having their major axes parallel to the length of the roll and relatively much greater than the minor axes.—A.P.-C.

**Suction Device for Paper Machines.** Soc. Invenzioni Brevetti Anon. Torino. Eng. pat. 315,690.—In wet presses of paper machines, where the pulp web is conducted there through between the wire cloth on which it is formed and a felt, the water which tends to collect in front of the nip of the press rolls is removed by a suction device having gudgeons mounted in semi-cylindrical bearings carried by pivoted arms. Adjustment screws and locking screws are provided.—A.P.-C.

**Adjustable Weir Strip for Cylinder Machines.** John D. Beatty. U. S. pat. 1,736,570, Nov. 19, 1929.—The weir over which the stock overflows into the vat containing the cylinder mold is provided with a flexible strip at the top, preferably made of rubber and reinforced with a steel bar. At intervals along the strip, means are provided for adjusting the height of the strip, each of the devices being independent of the others so that proper adjustments can be made at different points to insure that the flow of stock will be uniform across the whole width of the machine.—A.P.-C.

**Board Machine.** Clark C. Heritage. U. S. pat. 1,746,255, Feb. 11, 1930.—The machine comprises a very large suction drum divided into a number of segments, with cylinder molds disposed about the lower portion of the suction drum and in contact with it, so that the sheets formed on the cylinder molds are picked off on to the large drum.—A.P.-C.

**Modern Combination Board Machine.** R. W. Meunier. Papeterie 51, 1234-1242 (Nov. 10, 1929).—A description of the machine built by Escher Wyss and Co., and installed in the mill of S. A. Ent. Nugarische Carton-Pappenfabrik, at Budapest. The machine is provided with cylinder molds and also with two flat fourdrinier tables, and it can make seven different grades of paper, as follows: (1) lower fourdrinier only, high grade papeteries; (2) upper fourdrinier only with transferring felt, grocery paper glazed on one side or high grade printing paper; (3) upper and lower fourdrinier duplex papers; (4) cylinder part only with transferring felt, boards with one or two glazed sides; (5) cylinder part divided in two groups, plain strong cardboard, faced or bicolored; (6) cylinder part with one fourdrinier, strong cardboard faced on one side or bicolored; (7) cylinder part and both fourdrinier, double-faced triplex board in one or two colors. A.P.-C.

**Process and Apparatus for Moistening Paper Prior to Glazing on One Side.** Emil A. Ryberg. Fr. pat. 663,948.—In making machine-glazed paper, instead of using a Yankee machine, the paper is dried almost completely and is then moistened by passing over a water-cooled roll against which steam is discharged. More uniform distribution of the moisture is obtained by passing a felt, along with the paper, around the moistening roll and the roll which presses the sheet into contact with the large drying and glazing roll.—A.P.-C.

**Operation of Penberthy Equipment on Paper Machine Dryers.** Anon. Pulp Paper Mag. Can. 28, 711-712, 728 (Nov. 7, 1929).—A description of the construction and operation of the Penberthy circulator and Penberthy separator, as applied to paper machine dryers.—A.P.-C.

**Paper Dryer.** Stephen B. Stafford and Jown W. Vedder assignors to Rice Barton & Fales, Inc. U. S. pat. 1,731,876, Oct. 15, 1929.—The paper as it comes from the wet end of the machine is dried on slatted heated drums arranged in two series, one of which is appreciably higher than the other. Each drum is provided with a driving gear. Shafts are placed between successive adjacent drums; each shaft has a gear meshing with the gears on the adjacent drums so that the drums are all rotated in the same direction. One of the shafts of one series has a sprocket wheel and one of the drums in the other series has a sprocket wheel and is chain driven from the shaft provided with a sprocket wheel so as to drive both series of drums together.—A.P.-C.

**Paper Threader for Paper Machine Dryers.** Russell Carpenter. U. S. pat. 1,732,833, Oct. 22, 1929.—The purpose of the invention is to provide a device doing away with the usual rope type of paper carrier. A ring of same diameter is placed close to the front end of each dryer roll and co-axial therewith, and is mounted so that it can be pressed into contact with the head of the roll so as to be frictionally driven at the same speed. The periphery of each ring is provided with a circumferential series of tangentially disposed suction ports; a suction box is mounted in a fixed position within a recess in the outer face of the ring and extends from the point where the paper comes in contact with the dryer roll to where it leaves the roll. After the paper has completed its travel through the suction zone of the dryer roll, the paper is projected across the gap to the next roll by an air blast projected through the ports in the periphery of the rings, fixed guide boards being provided to direct the strip from one roll to the next. The suction boxes may be connected to the vacuum through a valve arrangement that successively connects the boxes in groups as the paper progresses through the dryers and disconnects the groups immediately their function has been completed.—A.P.-C.

**Steam Dryer System for Paper Machines.** Thomas H. Ireland. U. S. pat. 1,737,926, Dec. 3, 1929.—The rolls are divided into two or more series. The rolls of each set are connected in series so that the steam passes successively through all the rolls of a series from the dry to the wet end. The exhaust from the last roll of each series passes to an exhaust manifold, and from there to a suitable condensing system. Each roll (except the first of each set) is provided with a differential valve to maintain a definite temperature and pressure in the roll, this valve acting to admit direct steam in proper amount if the exhaust from the preceding roll is sufficient to maintain the desired conditions. Each line from one roll to the next is connected to the exhaust

manifold through a separator and a combination thermostat and float trap valve to remove condensate and air.—A.P.-C.

**Paper Rope Carrier.** Thomas Page. U. S. pat. 1,740,261, Dec. 17, 1929.—The carrier ropes pass around grooved rings or pulleys supported on the dryer roll bearings, on which they are mounted with ball bearings. During normal operation of the machine these pulleys are at rest. When it is desired to thread the paper, the rope-carrying pulleys at the end of one of the upper drying rolls can be pressed into contact with the head of the roll so as to be frictionally driven by it and thus driving all the other pulleys. When the paper has been threaded right through the dryers, the pulley is drawn out of contact with the cylinder head.—A.P.-C.

**Paper-Drying System.** Frederick C. Farnsworth. U. S. pat. 1,750,837, March 18, 1930.—The method consists in supplying steam to the dry-end section of dryers, separating the steam and water of condensation passing from this section, delivering the uncondensed steam into a section nearer the wet end separating the condensate from the steam, and finally supplying the uncondensed steam to one or more cylinders at the wet end section or where the sheet is wettest. The steam is circulated from section to section under a practically constant pressure differential by supplying the steam from the supply side of the cylinders of one section through a water seal and static head to the supply side of the next section whenever the differential between successive sections increases materially above the predetermined static head differential to be maintained.—A.P.-C.

**Asbestos Dryer Felts.** Anon. Paper Industry 11, 2157-2158 (March 1930).—At the Bromptonville mill of the Brompton Pulp and Paper Co., a 240-inch by 228-foot Asten asbestos dryer felt, on a 234-inch high-speed Walmsley news machine, served for a period of 249 working days, during which the machine output totalled 29,229 tons. This run was about 3¼ times the average obtained with duck felts, and the direct felt cost per ton of paper was thus reduced $0.046 (from $0.108 to $0.062), equivalent to $1690.50 a year on the mill's output (36,750 tons).—A.P.-C.

**Moisture-Content Tester for Paper Machines.** Charles A. Upson. U. S. Pat. 1,751,179, March 18, 1930.—A hood is provided over one of the drying cylinders, to trap the vapors issuing from across the full width of the sheet while on the cylinder. The vapors are then passed over a suitable wet- and dry-bulb psychrometer.—A.P.-C.

**Drying of Solids. III. Mechanism of the Drying of Pulp and Paper.** T. K. Sherwood. Worcester Polytechnic Institute, Worcester, Mass. Ind. Eng. Chem. 22, 132-136 (Feb. 1930).—The drying operation is in general divisible into a constant-rate period and a falling-rate period. During the constant-rate period the surface of the solid is wet with the liquid and the rate of evaporation is not a function of the water content; the major factors affecting the rate of drying in this period are the air velocity past the surface, heat conduction from adjoining dry surfaces, and radiation from the surroundings. The rate of drying falls off during the falling-rate period either because the wetted surface decreases or because the rate of internal liquid diffusion becomes controlling. Either of these mechanisms of drying or each in turn may prevail during the falling-rate period. When internal liquid diffusion is controlling, there is a tendency for the evaporation to occur not at the surface, but at points within the solid structure. Data on the drying of pulp show that this material dries according to the general mechanism of drying as outlined. Internal liquid diffusion is shown to control throughout the falling-rate period for the case of thick pulp slabs, and evaporation is shown to take place at points within the pulp structure. For the case of thin sheets of pulp or paper, the mechanism of drying during the falling-rate period is shown to be that of unsaturated drying.—A.P.-C.

**Performance of Economizers in the Drying of Pulp and Paper.** Frederick W. Adams and Charles M. Cooper. Mass. Inst. of Technology. Ind. Eng. Chem. 22, 127-129 (Feb. 1930).—A series of tests was made to determine the efficiency of a Brinertype economizer in recovering the heat used in the drying of pulp and paper. From the results of these experiments it is concluded that a recovery of 50 to 60% is good practice with this economizer when the heat is used only for the dryer system; but this efficiency may be increased greatly if there is a demand outside this system for large amounts of tempered air for ventliating purposes. The economic savings possible by the use of this equipment are shown by the calculation of heat recovery and costs in a hypothetical case.—A.P.-C.

**Cheaper Drying Systems for Board.** M. H. Wochenblatt für Papierfabrikation 60, No. 45: 1410 (1929).—Old ways mentioned and the means of bring these systems uptodate are discussed.—J.F.O.

**Suction Apparatus for Paper, Carton, Board and Similar Machines.** Charles Muller, Bern. D.R.P. 481,048, March 10, 1927.—Suction is ordinarily so arranged that the suction box is under the wire or felt and that the suction works from above downwards through the wire. With this invention, especially with cylinder machines, the suction is applied from above.—J.F.O.

**Improvement on the Steam Heated Drying Cylinder of a Paper Machine.** Linke-Hoffman-Busch-Werke A.G. D.R.P 480,134, August 9, 1927.—In the inside of the drying cylinder, one or more stationary steam pipes are arranged which blow steam out near the condensate reflector obliquely towards the inner wall of the drying cylinder, thus forcing the condensate to the cylinder wall by the rotation of the cylinder and so hindering the formation of water rings on the inner wall.—J.F.O.

**Process and Arrangement for the Drying of Board and Like Materials.** B. Schilde A.G. in Hersfeld. Swiss patent 132,628.—The places of support of the flat lying material experiences a cross sectional motion as well as a motion in the direction of the machine, thereby attaining a continuous relative displacement of drying.—J.F.O.

**Fourdrinier Machine for the Dewatering of Paper or Asbetsos with Cross Sectional Shaking of the Wire.** Victor Antoine, Lambermont, Belgium. D. R. P. 484,111, August 20, 1927.—J.F.O.

**Arrangement on a Dryer for Board.** H. Haas in Lennep. Austrian pat. 114,236.—A revolving carrier band with uniform velocity takes the sheets up perpendicular, singularly or in bundles, while a chain rod revolving over the band at a suitable distance at the side, limits the position of the sheet and through its periodic forward motion the thickness of the bundle is loosened up.—J.F.O.

**Arrangement for the Support of Paper, Board, and Similar Materials on the Drying Cylinders of a Paper Machine, Over Which the Sheet Travels, on a Machine Provided with Air Jets.** F. Grewin Norrkoping, Sweden. Austrian pat. 113,991, March 15, 1929.—The air jets are provided with a pipe projecting in between the machine parts.—J.F.O.

**Sucking Water with Stationary Suction Boxes and Rotating Filters.** A. G. Gerlach in Nordhausen. Austrian pat. 114,209.—The filter bed is composed of an oven and an obliquely arranged elevated part, the suction box being separated into many chambers.—J.F.O.

**Arrangement for the Cooling and Moistening of a Continuous Moving Sheet of Paper or Similar Material, by Means of Air, Blown from a Perforated Pipe Lying Across the Sheet, Upon a Textile Fabric Soaked in a Liquid, Through Which the Air is Blown Onto the Sheet.** Firma H. Krantz in Aachen, D.R.P. 484,503, Oct. 14, 1928.—The moistening carrying textile is an endless band revolving over rolls and past the air jets.—J.F.O.

**Combination Paper-Dryer Installation.** John E. Alexander. U. S. pat. 1,726,134, Aug. 27, 1929.—The dryer consists of a number of ordinary steam-heated cylinders and of an electrically-heated drying chamber, the steam generated in the electrical dryer chamber being used for heating the steam drying cylinders.—A.P.-C.

**Vapor Absorption Plants.** E. Norman Beavis, Carrier-Ross Engineering Co., Ltd. World's Paper Trade Rev. 92, 1806-1810 (Nov. 15, 1929).—A brief discussion of their merits for drying paper.—A.P.-C.

**New Improvement in Electrical Calender Drives.** R. Loucchart. Papier 32, 1099-1202 (Oct., 1929).—A small auxiliary motor is provided for raising and lowering the weights used to increase the pressure on the calender-roll journals, the connections being arranged so that the motor is automatically stopped when the weights have reached the proper position, that the weights are automatically raised when the calender is stopped, that they may be kept lowered when threading the paper, or that they may be raised without stopping the calender when there is broke which might injure the rolls if the latter were weighted.—A.P.-C.

**Gradual Temperature in Paper Drying.** C. F. Rasmussen. Rasmussen & Co., Chicago, Ill. Paper Trade J. 90, No. 8, 134-139 (Feb. 20, 1930); Paper Mill 53, No. 10, 16, 18, 20, 24, 26 (March 8, 1930).—A brief outline of the Penberthy dryer equipment which permits of controlling individually the steam to each dryer so as to obtain gradual drying. The advantages of the latter are discussed at some length.—A.P.-C.

**Roll Winders Under Scrutiny.** James A. Cameron. Cameron Machine Co. Paper Maker and Brit. Paper Trade J. International No. 47, 49 (1929).—A brief outline of winder development to date.—A.P.-C.

**Paper-Reeling Machine.** Wasaburo Okuura. U. S. Pat. 1,750,487, March 11, 1930.—In a paper reeling machine of the type comprising a number of reels mounted in a rotary frame, each brought into working position by intermittent rotation of the frame, each reel is direct-connected to a separate induction motor. Two auxiliary motors are provided, together with means connecting the rotors of the alternate reel motors to the stator of one of the auxiliary motors while the rotors of the remaining reel motors are connected to the stator of the other auxiliary motor. The connecting means consist of three groups of three rings and three groups of brushes contacting thereon. Each of the rings is covered for five-sixths of its peripheral surface with insulating material. The three rings of the first group are electrically connected with each phase of three-phase alternating current from an external source and with the rotors of six reel motors, and the three rings of the second and third groups are connected with the stators of the two auxiliary motors and with the rotors of six reel motors. The time of electrical connection of the external source with the reel motors and of the auxiliary motors is controlled by the position of the brushes on the rings.—A.P.-C.

**Arrangement for the Cutting of a Moving Sheet of Paper and Similar Materials in Single Pieces.** Walter E. Moline in London. Czechoslavakian pat. 28,551.

**Slitter With Printing Arrangement.** Goebel A.-G. in Darmstadt. D. R. P. 483,277, July 4, 1928.—The machine is so characterized, that in the printing of the sheets with one or more colors, one or more stationary rolls in contact with the wind-up roll are used as reprint rolls or as form cylinders, while the wind-up roll serves as the winding shaft or winding roll respectively.—J.F.O.

**Longitudinal Slitter for Endless Running Fiber Sheet Which Makes Possible the Simultaneous Adjusting of all Slitting Devices for Desired Sheet Widths and Provides Complete Visibility of the Knives.** Karl Mussbach in Gauting bei Munchen. D.R.P. 483,107, August 5, 1929.—Each slitter unit is coupled with an outside adjusting wheel on which any adjustable size can be fixed through screws running to the spokes of the wheel.—J.F.O.

### Wood Measurement

**Automatic Weighing of Wood.** George A. Balko. Canada Power and Paper Corp., Grand Mere, Que. Pulp Paper Mag. Can. 29, 183-184 (Feb. 6, 1930).—A brief general description of the chip-weighing and log-weighing equipment at the Laurentide Division of the Canada Power and Paper Corp., and its operation, together with a short summary of the results obtained during 1929. Frequent testing of the chip weightometer by means of a chain of predetermined weight per foot gave an average error of less than 0.5 per cent and a maximum error of less than 2.0 per cent. Frequent testing of the continuous totalizing log scales against platform scales gave an average error of 0.40 per cent and a maximum error of 2.20 per cent. The year's trial demonstrated the desirability of wood weighing, which has the following advantages: Variations in possible yield per cord of wood from different sources of supply can be observed daily and guess work is eliminated; the quantities of wood used in each process are known both by weight and by volume with reasonable accuracy; the ratios of raw materials to manufactured products are definitely determined.—A.P.-C.

**Problem of Weighing in the Pulp and Paper Manufacture.** A. Klose. Wochenblatt fur Papierfabrikation 60, No. 44: 1375 (1929).—For the economical operation of a pulp and paper mill the quantities of raw materials and the finished product, as well as the amount of refuse or waste should be accurately known. It is better to have actual weight than have the number of beaters, etc. Recommendations as to the types of scales and weighing devices are offered.—J.H.O.

### Barking and Cleaning

**Barking Machine.** Oresta E. St. John. U. S. pat. 1,727,491 Sept. 10, 1929.—The log is sustained on a stand and can be rotated by means of a pair of endless chains. A revolving cutter having a cutting length equal to the length of the log is supported above the supporting stand. Means are provided for moving the cutter into and out of cutting positions simultaneously along the whole length of the log while the latter is being rotated.—A.P.-C.

**Cutter for Bark-Removing Machines.** K.R.J. Lagus. U. S. pat. 1,728,578, Sept. 17, 1929.—In order to facilitate removal of the detached bits of bark from the cutter and prevent them from collecting in the cutter and blocking it, the latter is open at one end so that the cut off bark can be cast out. Through the open end of the cutter a part stretches into the cutter and prevents the detached pieces of bark from collecing in the cutter. The part in question is fastened in the cutter holder and placed in such a way that, in spite of its extending into the cutter, it does not hinder the latter's rotation.—A.P.-C.

**Bark-Removing Machine.** K.R.J. Lagus. U S. pat. 1,736,924, Nov. 26, 1929.—The invention relates to a light transportable barker. The log rests on four, rotatable, spiked wheels, two of which are keyed to a shaft, while the other two are loosely journalled on a parallel shaft. The distance between these two shafts can be varied to accommodate logs of different sizes. The rotary cutter is mounted on a carriage which can be made to engage with either one of two oppositely-threaded rotating parallel shafts, extending the full length of the machine. When in operation, the cutter is engaged with one of the threaded shafts, which makes it travel along the log; when it has reached the end of its course, it is automatically disengaged from the first and engaged with the second threaded shaft. When the log has been completely barked, the cutter is manually disengaged from both shafts.—A.P.-C.

**Barking Drum.** P. P. Westbye. U. S. pat. 1,739,564, Dec. 17, 1929.—The invention relates to multiple-section barking drums. The end heads of the drum sections have a substantial ring portion and a curved bow portion terminating with edges so constructed that the male end of one section interlocks with the female end of the adjacent section. This construction is claimed to give a robust connection and rigid support to prevent brooming of the ends of the logs and passing from one section to the next, to prevent accumulation of bark, which is washed out by the spray water, and to simplify the assembling of the drum and reduce the time and labor required to construct and assemble the drum.—A.P.-C.

**Bark-Stripping Machine.** Hubert Vogl. U. S. pat. 1,751,258, March 18, 1930.—The log is simultaneously rotated and conveyed longitudinally past a cutter for removing the bark. In

advance of the barking knife is a cutter for stripping branches from the log.—A.P.-C.

### Chip Preparing

**Chipper.** William J. Merkel and Ernest C. Shaw assignors to Allis-Chalmers Mfg. Co. U. S. pat. 1,736,858, Nov. 26, 1929.—The patent covers a chipper for slabs. The slabs are fed horizontally towards the chipper by means of fixed parallel feeding rolls, over which is a series of cooperating feeding wheels which are pivotally mounted so as to adjust themselves to slabs of different thicknesses. The cutting knives are mounted so as to cut the slabs at an angle of approximately 45° with the direction of feed. The chipper proper is enclosed by a cover. A series of heavy presser arms are hinged to the cover and their other extremities rest on the slab very near the point of cutting so as to hold the slabs and prevent chattering, the movable ends of these arms being shaped so as to be automatically raised by the advancing slabs if these are of greater thickness. The weight of the presser arms is partially counter-balanced by means of suitable weights.—A.P.-C.

### Digesters

**Barometric Tube for Limiting the Pressure in Digesters.** Papeteries Navarre. Fr. pat. 668,942, May 21, 1928.—The tube, which is intended as a safety valve, consists of a mercury filled U-tube, provided with an expansion chamber and a separator at the top of the open leg to catch any mercury which might be blown out when the pressure in the digester rises too high.—A.P.-C.

**Apparatus for Charging Cellulose Digesters.** P. A. Fresk. U. S. pat. 1,720,575, Sept. 24, 1929.—The apparatus comprises a funnel-shaped member for feeding material to the digester, and a second funnel-shaped member, co-axial with the first and disposed under and overlapping the first. Compressed air is directed past the first funnel. Chips passing through the first funnel into the second is entrained by the air and is projected from the second funnel at a high velocity and is discharged through a rotating trough mounted on the lower open end of the second funnel to distribute the chips uniformly over the whole section of the digester.—A.P.-C.

**Inspection and Insurance of Pressure Vessels in the Paper Industry.** William D. Halsey, Steam Boiler Inspection and Insurance Co., Hartford, Conn. Paper Trade J. 90, No. 8, 261-264 (Feb. 20, 1930).—A discussion of the possible causes of explosions of sulphite, sulphate and soda digesters, paper machine dryers and compressed air tanks, and of the precautions which should be taken to prevent such accidents. A few disastrous accidents which occurred within recent years are discussed, more particularly describing the course followed by corrosion, in both sulphite and sulphate digesters.—A.P.-C.

**Arrangement on Rotating Digesters.** E. Morterud. Moss, Norway. Swedish patent 67,745, March 2, 1926.—The introduction of heated cooking liquor to the digester is carried out through a stationary pipe inserted in the hollow rotating trunnion of the digester. The space between the trunnion and the pipe is packed, the packing being protected against expansion by a cooling water chamber in the pipe arranged concentric with the pipe.—J.F.O.

**Pulp Digester in the Inside of Which is a Heating Body of Perforated Plate.** Zellstoff-fabrik Waldhof and Adolf Schneider. D.R.P. 483,347, April 9, 1924.—The heating surfaces are arranged in niches in the digester which are covered with removable perforated, partially perforated, or unperforated plates. At the lowest point of the heating surface a collecting space for incrustatious material is provided which space is accessible through a removable seal. The heating surface is composed of a single part which can be passed through the throat of the digester.—J.F.O.

**Process and Arrangement for the Charging of Cellulose Digesters and the Like, Whereby the Charging of the Digesters is Carried Out by Pressure Means, Suitably an Air Stream.** A. Fresk in Robertsfors, Sweden. Austrian patent 114,108.—For the purpose of spreading the digester charge during its filling, compressed air is used to give the charge a swirling motion.—J.F.O.

### Washing and Concentrating

**Pulp Washing on Vacuum Filters.** H. A. Morrison. Oliver United Filters, Inc. Paper Mill 53, No. 8, 56-68 (Feb. 22, 1930); Paper Trade J. 90, No. 9, 45-46 (Feb. 27, 1930).—A discussion of the performance of vacuum filters for the washing soda and kraft pulp to remove alkali, and of bleached pulp to remove bleach residues.—A.P.-C.

**Rotating Suction Drum Filter or Machines for the Production of Paper, Board, Carton and Similar Materials.** D.R.P. 483,582. Kl 55d Gr 16 July 24, 1925 St. Anne's Board Mill Co. Ltd. and R. B. Heys.—J.F.O.

### Screening

**Centrifugal Separation in Stuff Preparation.** Sven C. Lindberg. Centrifugal Engineering and Patents Corp., New York. Paper Trade J. 90, No. 8, 187-195 (Feb. 20, 1930); Paper Mill 53, No. 8, 52, 54, 60, 62 (Feb. 22, 1930).—An explanation of the principle of centrifugal separators (Erkensator, Bird centrifiner, Tolhurst centrifugal), with a brief description of their construction and operation and discussion of their performance and merits.—A.P.-C.

**Elimination of "Dirt" from Paper Stock.** R. H. Clapperton. World's Paper Trade Rev. 93, 114-118, 164-172 (Jan. 10, 1930).—A discussion of the methods of removing dirt from paper stock and of the advantages of the erkensator for this purpose—A.P.-C.

**Apparatus for Screening Paper Stock.** Andrew J. Brookover. U. S. pat. 1,737,296, Nov. 26, 1929.—A number of flat diaphragm screens are arranged in series at successively lower levels. Each screen box is provided with a number of diaphragms which are arranged in the screen box transversely of the series of boxes. Arranged longitudinally of the series of screen boxes are drive shafts extending the full length of the series, and each shaft is preferably placed centrally under one of the diaphragms of a screen box. Each shaft operates one of the diaphragms of each of the screen boxes, so that in case one of the shafts is stationary, the practical operation of the whole series of screens is not interrupted. The ends of the shafts preferably project beyond the ends of the series of screens, and are driven independently of one another.—A.P.-C.

**Knotter or Pre-Screen for Sulphite Pulp.** A. C. Andersen and A. Schie, Sarpsborg, Norway. Finnish patent 12,458, December 29, 1926.—The slowly revolving drum is in a continuous shaking motion. Simultaneous a disc fastened on the bos of the screening drum causes a displacement of the drum in a small determined angle with each revolution of the shaft.—J.F.O.

**Arrangement on Knotter Plates.** Linkopings Armatur och Metallfabrik A.B., Linkoping, Sweden.—The distance between the single slits are less than the corresponding channels on the under side of the screen plate.—J.F.O.

**Horizontal Centrifugal Screen for the Manufacture of Paper.** Andreas Biffar, Miltenberg, a.M. D.R.P. 483,441, May 16, 1924.—With this new centrifugal screen, the stock inlets are on both ends and the inlet for water as well as the rejection of knots and slivers are at the center of the housing. In this manner the water entering with appreciable pressure is immediately directed in its course to the centrifugal body. Centrifugal screens with the inlet for the water as well as the white water arranged diagonally in the center of the drum are known, but it is the combination of the same that is new.—J.F.O.

**Screen Used in the Production of Paper Cellulose and Paper Board.** Oesterr. Bamag-Buttnerwerk A. G. in Linz. Czechoslavakian patent 28,759.—The fiber separation from the screenings in the zone of the continuous screen and fiber separation from the water in the zone of the supplementary screen or from one or both is taken up with a hollow cylindrical or multi angled drum which is provided with shower pipes directed inwards and

itself revolving within so that the liquid is led into the drum and forms on the inner wall of the drum surface, a uniform ring sprinkled and splashed toward the screen by means of centrifugal power.—J.F.O.

**Apparatus for the Separation of Liquids from Sludges by means of Screens.** J. D. Ullgren in Stocksund, Sweden. Swedish patent 68,003. April 27, 1928.—The screen mantel for liquid dunning from the inside out, possesses a movable doctor on the inside which keeps the screen clean. This consists of collecting rings with a C from cross section and takes such a position on the screen, that one end of it forms the real doctor. On one end it is fastened to a disk which forms at the outlet the lateral demarcation of the screen, which is provided with an opening in the middle before each groove through which the stock is doctored, collected and taken out.—J.F.O.

**Screen for Pulp, Ground Wood and Similar Substances, with a Scoop Arrangement, Whose Axis Lies Perpendicular to the Direction of the Stock and the Form of the Screen or Grate Scoop Corresponds to the Cross Section of the Stock Channel.** Thunes Mekaniska, Vaerksted in Skoyen. D.R.P. 483,035, November 16, 1926.—Between the scoops are provided axial channels or grooves running on the surface of the scoop shaft. A shower pipe sprays radially towards the shaft and in such a manner that the splinters and similar materials are led away longitudinally along the channel on the shaft.—J.F.O.

**Process for Pressing Out the Liquids from Sulphate Pulp.** Kristian Holten and Olaf Qviller, Oslo, Norway. D.R.P. 480,643. April 27, 1926.—In the pressing of sulphate pulp, the outlet line for the liquors shows a decided tendency to plug up so that the operation must be frequently stopped for cleaning. It has been determined that the plugging up of the outlet line is due to the basic lignin substances carried along with the salts in the sulphate pulp, combines with the metal on the wall of the outlet and the press surface. These disadvantages are eliminated with this invention.—J.F.O.

**Cleaning of Paper Fibers.** W. L. Glass, Tolhurst Machine Works, Inc. Paper Mill 52, No. 46, 37-38 (Nov. 16, 1929).—A brief discussion of the construction, operation, applications and merits of the Tolhurst centrifugal for the cleaning and preparation of paper fibers.—A.P.-C.

### Save-Alls

**White Water Loss Determinations.** Frederick Wierk. Johnson and Wierk, Inc. Paper Trade J. 89, No. 19, 67-68 (Nov. 7, 1929).—A description of the method of measuring white water by means of a rectangular weir with end contractions, together with a chart for rapidly determining flow (based on Francis' formula), which, together with the fiber content, gives the fiber loss in the white water.—A.P.-C.

**Paper Mill Operation.** Donald K. Patillo and James McMahon assignors to Mathieson Alkali Works, Ltd. U. S. Pats. 1,733,070 and 1,733,071, Oct. 22, 1929.—*No. 1,733,070*—Previous to the paper making operation the stock is treated with chlorine to sterilize it, and the white water from the paper making operation is subjected to coagulation and a stable sterilized product is recovered from it which is suitable for storage or shipment. *No. 1,733,071* relates to a process in which half-stock or fiber-water mixture is treated with chlorine to sterilize it after formation in the beater and before making into paper.—A.P.-C.

**Save-All.** Lemuel B. Decker. U. S. pat. 1,731,193, Oct. 8, 1929.—A cylinder mold is mounted on ball or roller bearings so as to rotate about a fixed, hollow shaft. The latter is divided near one end by a transverse partition to provide a vacuum chamber at one end of the shaft and a ventilating chamber at the other end. Attached to the shaft and communicating with the vacuum chamber thereof, are a series of tubes extending downward nearly to the bottom inside wall of the cylinder mold, to draw off the white water passing through the wire covering of the mold; similar tubes connected to the ventilating chamber of the shaft extend upwards into the inner portion of the cylinder mold which is not immersed in the white water. A pair of partition wings project horizontally on either side of the shaft and extend near the inner wall of the cylinder mold. A foundation matting of coarse stock is formed on the cylinder mold just before it dips into the main body of white water, so as to hold back all the fine fibers. This foundation matting may be made by adding coarse stock to the white water, but is preferably obtained by passing the white water itself through an inclined screen, sending the filtrate to the vat of the save-all, and using the stock held back on the screen to make the foundation mat.—A.P.-C.

### Special Treatment

**Pulping Machine.** Harry N. Weir assignor to The Noble and Wood Machine Co. U. S. pat. 1,724,441, Aug. 13, 1929.—The machine consists of a stationary horizontal drum, a portion of the lower half of the shell being perforated while a feed opening is provided in the upper part. At the center of the drum is a shaft around which are a number of longitudinal rolls extending practically the full length of the drum. The rolls are trunnioned in radial guideways fixed to the shaft, so that, as the later rotates, the rolls are carried around with it and at the same time move to and fro between the shaft and the shell of the drum.—A.P.-C.

**Process for Making Paper from Peat.** Charles C. Roth assignor to Peat Products Co. U. S. pat. 1,721,974, July 23, 1929.—Peat in the natural state is torn into fibers, mixed without one-third its quantity of a half-stuff formed from rag clippings, freed from surplus water, treated with rosin and alum, and formed into sheets.—A.P.-C.

**Refining Raw Wood Pulp.** Milton O. Schur Assignor to Brown Co. U. S. pat. 1,730,386, Oct. 8, 1929.—A lime-digested pulp is deresinified and then bleached.—A.P.-C.

**Processing Cellulosic Fiber.** Milton O. Schur and Royal H. Rasch assignors to Brown Co. U. S. pat. 1,730,387, Oct. 8, 1929.—Cellulosic material such as wood pulp freed from encrusting substances is treated with organic solvents such as alcohol and carbon tetrachloride to remove resinous impurities.—A.P.-C.

**Process and Arrangement for the Purification of Plant Fibers, Whereby the Stretched Fiber Material is Led by Conveying Means to the Purification Apparatus.** Fried Krupp Grusonwerk A.G. D.R.P. 483,845, December 13, 1925.—The process is carried out in such a manner, that both ends of the fibreous material are conveyed to the purification apparatus, where the action takes place on both sides in the desired sequence.—J.F.O.

### Beating

**Paper Making Specialties.** Anon. World's Paper Trade Rev. 92, 1650-1654 (Nov. 8, 1929).—A very brief description of some of the specialties made by Betrams, Ltd.: Milne beater, shake systems and hot air drying systems.—A.P.-C.

**Wiener Pulp Refiner.** Anon. Paper Mill 53, 11, 14, 31 (March 15, 1930).—In the Wiener refiner, cast iron shell and plug are used, with bars cast solid. The pulp is fed in at the large end and in order to overcome centrifugal force an impeller is provided at the large end of the plug. The advantages claimed for it are: large capacity, simple and rugged construction, minimum amount of wear which is distributed uniformly over the working surface, quicker and more thorough hydration due to the hydraulic pressure set up inside the casing, the high rim-speed of the rotor tends to cause the fibers to assume a position parallel with the direction of rotation thus favoring combing out of the fibers rather than cutting; low cost for power and replacement, and elimination of pumping equipment as the refiner can raise the stock to a height of 20 feet.—A.P.-C.

**Power Savings on a Paper Machine.** G. H. Golbs. Wochen blatt fur Papierfabrikation 60, No. 43: 1334 (1929).—The power consumption on a vacuum drier of 450 tons discussed, as well as on a machine equipped with roller bearings. Three methods of measuring the power consumption of the drying cylinders were used and the power saving computed.—J.F.O.

Section of the
# COST DEPARTMENT
of the
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Edited by T. J. Burke C. A. Director Cost Dept.

# How To Treat Fixed Expense Variance?*

By W. F. Burke [1]

In modern industrial accounting it is becoming more and more common to use predetermined and fixed man-hour rates, machine-hour rates, or percentages of direct labor, to absorb overhead, the amount absorbed being charged to work in process and the difference between the amount absorbed and actual expenditures being transferred to a variance account. Advances in budgeting practice make it possible to analyze the variance account to show what part is due to variations in the volume of business and what part is due to economies on the one hand and waste on the other. Variations in the volume of business affect the amount of fixed expenses which are absorbed. When business is above normal, fixed expenses are overabsorbed, and when business is below normal, fixed expenses are underabsorbed. Budgets have brought to light the relation of factory expenses to the volume of production and resulted in classifying expenses as fixed and variable with a number of gradations between.

The usual practice is to charge all variations to profit and loss in the month in which they are incurred. There are some accountants, however, who favor carrying the monthly overhead variation to a reserve account, while others favor carrying to a reserve account only that portion of the variance represented by fixed and semi-fixed expenses, and transferring to profit and loss that portion which represents variations from standard expenditures.

These divergent opinions can be made clearer and the principles involved can be explained by giving as an illustration an extremely simple case. A factory with one overhead rate which is applied on direct labor, the direct labor being entirely piece work, and therefore standard, and any allowances paid to piece workers above piece work earnings being charged to indirect labor. In a case like this, direct labor is the best measure of production. After a careful analysis, normal direct labor is stated at $100,000 per month, and normal overhead expenditures are stated at $200,000, the detail of which is given in Table I. A normal overhead rate of two hundred per cent is established which is used to absorb overhead and to figure the costs of the various products manufactured not only for the purpose of giving the sales department a basis on which to fix selling prices, but also for the purpose of valuing inventories and figuring cost of sales.

Next a budget is set which gives the standard expenditures allowed for various volumes of production. The budget recognizes that some expenses vary directly with production and that some do not. Careful analysis and sound judgment are required to determine the degree of variability of many items, but the matter of explaining how budgets are established need not be discussed here. Actual expenditures, standard expenditures, and overhead absorbed for a month when the plant is operating one hundred and twenty per cent of normal are given in Table II. The same items for a month when the plant is operating eighty per cent of capacity are given in Table III.

In Table II the overabsorbed overhead for the month is $29,000, of which $25,000 is overabsorbed fixed expenses and $4,000 is the amount saved by keeping expenditures below the budget. The three ways of handling the variance are as follows:

### Three Ways of Handling Variance

1—Credit $29,000 to current income. A variation of this method would take into account the overhead value in the inventory and credit current income with that portion of the overabsorbed overhead which applied on the goods sold during the month.

2—Credit $29,000 to a reserve account.

3—Credit $25,000 to a reserve account entited "Reserve for Business Depression" and credit $4,000 to current income, showing this amount as a separate item in profit and loss statement.

TABLE I
NORMAL EXPENDITURES PER MONTH

| | |
|---|---|
| Direct labor | $100,000 |
| Indirect labor | 50,000 |
| Supplies | 10,000 |
| Loss on defective work | 10,000 |
| Maintenance | 20,000 |
| Power | 10,000 |
| Depreciation and taxes | 30,000 |
| Total departmental overhead | $130,000 |
| General plant expense | 70,000 |
| Total overhead | $200,000 |

Table 1—Details of Normal Overhead Expenditures per Month.

TABLE II
A MONTH WHEN PRODUCTION IS ONE HUNDRED AND TWENTY PER CENT OF NORMAL

| | Actual | Standard | Absorbed | Fixed Expense Variance |
|---|---|---|---|---|
| Direct labor | $120,000 | $120,000 | $120,000 | ..... |
| Indirect labor | 54,000 | 55,000 | 60,000 | $5,000 |
| Supplies | 12,000 | 12,000 | 12,000 | ..... |
| Loss on defective work | 11,000 | 12,000 | 12,000 | ..... |
| Maintenance | 21,000 | 22,000 | 24,000 | 2,000 |
| Power | 11,000 | 11,000 | 12,000 | 1,000 |
| Depreciation and taxes | 30,000 | 30,000 | 36,000 | 6,000 |
| Total departmental overhead | $139,000 | $142,000 | $156,000 | $14,000 |
| General plant expense | 72,000 | 73,000 | 84,000 | 11,000 |
| Total overhead | $211,000 | $215,000 | $240,000 | $25,000 |

Table 2—Actual Expenditures, Standard Expenditures, and Overhead Absorbed for a Month When Plant is Operating One Hundred and Twenty Per Cent of Normal.

* The American Accountant.
[1] Chief Accountant, Scovill Manufacturing Co., Waterbury, Conn.

TABLE III

A MONTH WHEN PRODUCTION IS EIGHTY PER CENT OF NORMAL

| | Actual | Standard | Absorbed | Fixed Expense Variance |
|---|---|---|---|---|
| Direct labor | $80,000 | $80,000 | $80,000 | ..... |
| Indirect labor | 46,000 | 45,000 | 40,000 | $5,000 |
| Supplies | 9,000 | 8,000 | 8,000 | ..... |
| Loss on defective work | 8,000 | 8,000 | 8,000 | ..... |
| Maintenance | 19,000 | 18,000 | 16,000 | 2,000 |
| Power | 8,000 | 9,000 | 8,000 | 1,000 |
| Depreciation and taxes | 30,000 | 30,000 | 24,000 | 6,000 |
| Total departmental overhead | $120,000 | $118,000 | $104,000 | $14,000 |
| General plant expense | 68,000 | 67,000 | 56,000 | 11,000 |
| Total overhead | $188,000 | $185,000 | $160,000 | $25,000 |

Table 3—Actual Expenditures, Standard Expenditures, and Overhead Absorbed for a Month When Plant is Operating Eighty Per Cent of Normal.

In Table III the underabsorbed overhead is $28,000, of which $25,000 is underabsorbed fixed expense and $3,000 is the amount lost by expenditures in excess of the budget or standard. The entire variance can be charged to current income, it can be charged to reserve, or $25,000 can be charged to a reserve and $3,000 charged to current income. If there is no reserve for charges of this kind, a deferred charge account must be created.

The argument in favor of the first method is that actual overhead expenditures should be applied against inventory and current income. In case there is an overabsorbed balance, it is claimed that not only is it incorrect to charge to income more than is spent, but any method of setting up a reserve is inaccurate and subject to all the errors attendant upon business forecasting. In case there is an underabsorbed balance and it is necessary to carry the variance in a deferred charge account it is said that the money has been spent, there is nothing to show for it, and it should be written off.

### Methods Differ in Disposition of Variances

The arguments for the second and third methods are the same so far as the reserve account goes, and what is said for one applies to the other in this regard. They differ in the disposition of the variances from standard. Of course, if a plant has no budget, there can be no distinction between the two methods. Losses incurred and savings made on current production, if they are known, should be reflected in current income. There is no more justification for carrying them in a reserve than there is for carrying an abnormal profit on a job or line of goods in a reserve with the expectation of using this reserve to offset future losses. If carried to their logical conclusion practices of this kind would result in showing a normal profit every month and every year, the variations between actual profit and normal profit being carried in a reserve or deferred charge account.

What is there about the variation of standard expense from absorbed expense which justifies carrying the variation in a reserve or deferred charge account? This question will be answered by considering the nature of fixed expense variations and inquiring into the way the factory organization functions in periods of abnormal production. When production varies from normal—certain overhead expenses are cut or increased in direct proportion to the changes in production. Such expenses are supplies, loss on defective work and certain classes of unskilled labor which can be replaced at less expense than it costs to carry them through a period of depression. Leaving depreciation and taxes aside for the moment, other expenses are changed only partially or not at all as production varies. For the most part these comprise wages paid to executives, clerks, research men, mechanics, and the like.

In a period of depression it is good policy to maintain the organization in order to have skilled workers available when business returns to normal. They are kept on the payroll not because they are needed when business is depressed, but because they will be needed when prosperity returns. For this reason alone unabsorbed expenses connected with these employees are a deferred charge to future operations. But going beyond this, although these skilled workers may not be expending normal effort during depression, they are recuperating from the previous rush and preparing for busier times to come. Calm reflection is taking place, ideas are being developed, plans are being made, and work that has been postponed is being taken care of to a much greater extent than during busy periods. This kind of work is vitally important for the success of the business yet it has no asset value on the balance sheet.

A fitting way to express these values is by the operation of the deferred charge or the reserve account already described. Makeshift practices may be resorted to such as carrying inventories with overhead rates in excess of normal, capitalizing research and planning expenses, and charging repairs to the depreciation reserve account. The fault with these methods is they do not cover the whole ground, they are obscure, and they are apt to create values in the balance sheet which are misleading and which will not be written off at the proper time.

### When Operating Above Normal

Now consider what these skilled workers do when the plant is operating above normal. It is known that the number of this class of workers does not increase as fast as production increases. They are able to handle more work because they have prepared for it and because they are rested. Every human being has within him the capacity to do more work, both mental and physical, when laboring under pressure. Some men can continue at top speed longer than others. If the rush period is prolonged, the strain will begin to tell. Before an unusually busy year is out there will be demands for extra help and increases in budget standards. Foremen will feel that they are losing their grip and demand assistants, clerks will gradually get behind in their work and office heads will apply for more clerks, and so on along the line. During these periods deferred charges for underabsorbed fixed expenses should be written off and a reserve built up to cover the exhaustion of human energy and preparation as well as the exhaustion of physical plant in excess of normal depreciation rates.

### Personnel an Important Asset

The problem has much to do with human values. Without doubt one of the most important assets a business has is its personnel. Change the personnel completely, pay the same wages, and disaster will very likely be just around the corner. Yet human values are not stated in the balance sheet and it is not necessary that they should be so stated. Accountants, however, will do well to take into the balance sheet variations in human values because they can be reflected in the profit and loss statement. If any asset is consistently stated a fixed amount below its actual value from month to month and from year to year, this misstatement, however unpardonable it may be, has no effect on the monthly and yearly profit and loss statements. It is change in value that is significant.

So it is with human values. If their normal worth, even though it be thousands of dollars, be stated as zero for a start, a decrease in value should be carried in a reserve account and an increase in value above the starting point should be carried in a deferred charge account. As has already been explained, variations in human values do take place as a result of the ups and downs of business, and these variations can be shown in dollars and cents because they make up an important part of the fixed expense variance.

What has been said so far applies chiefly to indirect labor and general plant expense and to some extent to maintenance. Maintenance and depreciation are important items in the fixed variance. It is the usual thing to find that during dull periods repairs are made to equipment which cannot be shut down for repairs during busy periods. Also mechanics and toolmakers take the opportunity to build up a reasonable supply of spare machine parts and tools which they know will be used later on and which may now find their way into the stores account. During rush periods maintenance is often deferred and spare parts and tools

are consumed. At the end of a period of depression the plant may be in better shape than it was at the end of the preceding period of activity, but no change is made in its value on the books. Here again the fixed expense variance is helpful in adjusting values.

Depreciation is most commonly taken at a fixed rate per annum regardless of production, yet a scheme which would depreciate a piece of equipment at a rate proportionate to the amount of work it produced would be very desirable. Such a scheme is approximated by depreciating at a fixed rate per unit of time and then keeping the fixed expense variation out of current income.

The exact amount of property taxes paid or accrued are not charged to current income if the fixed expense variance does not balance during the fiscal year. This objection to the plan can be answered readily. In a year of depression the plant has more buildings and equipment than it needs, and its inventory may be out of proportion to the volume of business done. These investments are retained in order to take care of the expansion which is to come and therefore taxes paid on the extra investment should be apportioned to future business. When business is above normal the plant is reaping above average benefits from its investment and above average taxes should be charged against income.

If the plant buys its power, the price paid per kilowatt hour varies with the amount of power used, being above average when production is below normal, and below average when production is above normal. The balance sheet valuation given to fixed expense variance results in charging to current income an amount different from the price paid. The effect is the same as it would be if the plant generated its own power and the cost elements subjected to the rules of variation which have been described.

The arguments which have been given in favor of keeping fixed overhead expense variations out of the profit and loss statement can be applied equally well to administrative, selling, and advertising expenses. Since the principles involved have already been described at some length, a detailed discussion of their application to these expenses will not be given here.

### Cycles Upset Yearly Equalization

Some accountants may agree to holding fixed expense variations in reserve in monthly, quarterly, and semi-annual statements, but may refuse to carry them in the balance sheet over the end of the year, because they prefer to make year-end adjustments to clean the slate. It would be ideal if business expanded year by year in a straight line. The fixed charge variance would tend to equalize itself in a year's time and its function would be merely to adjust expenses for seasonal variations. But unfortunately business goes through cycles which in the last decade have averaged about three years. Therefore a truer picture of the profits made in each year of the business cycle can be obtained by figuring on the underabsorbed and overabsorbed fixed expense balancing over a period of approximately three years and carrying the net balance at the end of each year in the balance sheet. If it is apparent that standards have been established incorrectly, changes should be made immediately. Of course an exact balance in the variance over a period of three years or any other time is impossible, but it is astonishing how close the variance will come to balancing when normal overheads and budgets are carefully set.

A concern which prides itself for its conservative accounting probably would not care to carry any underabsorbed fixed expense as a deferred charge. It would probably set up a reserve during a period of prosperity and charge underabsorbed fixed expense to the reserve during the ensuing period of depression. There is no serious objections to this since variations in balance sheet values are more significant than the values themselves. A less conservative concern would have good reasons for carrying deferred fixed expense in its assets at the end of a period of depression.

The problem of evaluating physical assets is by no means an easy one, but the problem of evaluating intangible assets is much more difficult. The method of treating fixed expense variance described in this paper is an attempt to meet these problems. It is sound in theory and can be applied perhaps even more accurately than depreciation and obsolescence rates can be applied. Its adoption will result in the same total profit or loss being shown for a complete business cycle, but there will be marked differences in the profits shown in abnormal years. The further our machine age progresses, entailing as it does relatively larger investments in fixed assets and the employment of a larger proportion of skilled men, the greater importance this subject assumes.

## A New Era in Tariff Making

"The Tariff Act of 1930 marked the beginning of a new era in tariff making in the United States," said Warren B. Bullock, manager of the Import Committee of the American Paper Industry, before the Madison, N. J., Kiwanis club, Wednesday November 5. "This was probably the last tariff which will be written by widespread logrolling methods, and the making of scientific tariffs is not an idle dream of the future.

"The paper industry early sensed the new trend of thought. In appearing before Congress on the schedules affecting paper, the paper industry took the firm position that protective duties should be asked only to an extent which would balance off European prices with American costs, duties only sufficient to give the American mill an equal chance with the foreigner for his home market.

"While other industries were before lobby investigating committees, this program of the paper industry resulted in a scientific study of conditions, and the paper industry was given the additional protection which it asked, and which could be proved to be necessary.

"The Tariff Commission was given a new program of activity, so that changes in rates of duty can be made when facts warrant, without the business upheaval that always comes with a general revision of import duties.

"The paper industry has gone a little farther, and by an organization of the manufacturers known as its Import Committee, has placed the best technical skill and marketing experience of the industry at the disposal of Government authorities, to the end that evasions of the law may be held to a minimum and the industry given in fact the protection against low priced foreign competition which Congress intended it to have by the duties written into law."

## Production of News Print for October

Production of news print in Canada during October, 1930, amounted to 213,817 tons and shipments to 221,748 tons according to the News Print Service Bureau. Production in the United States was 105,450 tons and shipments 102,808 tons, making a total United States and Canadian news print production of 319,267 tons and shipments of 324,556 tons. During October 25,395 tons of news print were made in Newfoundland and 982 tons in Mexico, so that the total North American production for the month amounted to 345,644 tons.

The Canadian mills produced 132,201 tons less in the first ten months of 1930 than in the first ten months of 1929, which was a decrease of 6 per cent. The United States output was 70,165 tons or 6 per cent less than for the first ten months of 1929. Production in Newfoundland was 27,177 tons or 13 per cent more in the first ten months of 1930 than in 1929 and in Mexico 4,102 tons less, making a total decrease of 179,291 tons or 5 per cent.

During October the Canadian mills operated at 67.0 per cent of rated capacity, United States mills at 71.9 per cent and Newfoundland mills at 102.1 per cent. Stock of news print paper at Canadian mills totalled 52,547 tons at the end of October and at United States mills 33,318 tons, making a combined total of 85,865 tons which was equivalent to 5.0 days' average production.

# New England Paper Merchants Meet

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., November 17, 1930—A large number attended the meeting of the New England Paper Merchants Association at the Harvard Club of Boston, Thursday evening, including several out-of-town members. William H. Rourke, of the Rourke-Eno Paper Company, Inc., Hartford, Conn., came the longest distance. President Arthur E. Ham presided. Resolutions were passed on the death of Perry Burnham Von Olker, of the Von Olker-Snell Paper Company.

R. C. Harrington, assistant manager, Ernst & Ernst, Boston, Mass., accountants for the National Paper Trade Association, was the principal speaker and gave the following address:

### R. C. Harrington Addresses Gathering

"Your president has asked me to talk to you briefly on the work which we are doing for the National Paper Trade Association. As you know, we have been working very closely with the National association in the development of uniform cost accounting methods and in the establishment of Net Profit Control for paper merchants. The members of the association have all been furnished with copies of the various booklets which have been issued on these subjects and we feel that these booklets have presented the situation in a very clear and comprehensive manner. You will find included therein detailed descriptions of the functions of the various accounts which are recommended and the method of determining the overhead expenses in the four major sales classifications.

"As the accountants for the National association, it is our responsibility to keep in close contact with developments in the industry, particularly as they relate to costs of doing business, and to render such assistance as may be required of us from time to time by individual members of the association in working out their accounting and business problems. We have already had a number of engagements from members of the Association, and the work which we have done so far has demonstrated conclusively to us the value of proper cost accounting in this industry.

### Cost Accounting Methods Approved

"The classification and distribution of expense, as outlined in the uniform accounting method recommended to the members of the association, was decided upon after extensive surveys of the accounting problems of a few selected merchants, and the conclusions reached may, therefore, be accepted as representing the best thought on the subject to date. Of course, it goes without saying that I want to sell the individual members of the association the idea of 100 per cent co-operation in adopting and using the cost accounting methods recommended because I stand firmly on the basis of accurate and reliable costs in the determination of selling prices and business policies.

"I noticed in your booklet on Net Profit Control the term 'enlightened selfishness,' which was used to describe the policy of educating salesmen to make more money for themselves in order that they might make more money for their concern. It is refreshing to see this fundamental truth stated in this way because, in the final analysis, is it not true that the desire to profit for oneself is the dominating factor in business today? We are all in business to make a profit. The desire for profit dominates the entire structure of our economic system. It makes no difference how large or how small a business may be, the ultimate goal is profit.

"I have heard many business men say that accounting is a necessary evil to be provided for at the minimum of expense, and that accounting cannot increase profits. Business men who take the view that accounting is not a valuable business asset have failed to consider the question from all sides, because if it is granted that profits can be increased by stopping losses and leaks of various kinds, then accounting is most certainly responsible for increased profits. In other words, accurate accounting points the way to economics of operation, proper balance between selling prices and expenses, proper control of the inventory investment, and many other controllable factors, all of which have a bearing on the net profits of business. The surveys which we have made of paper merchants have amply demonstrated these facts.

### Net Profit Control

"For example, let us look at the item of net profit appearing on the operating statement of the average business. Such an operating statement will show some detailed figures, starting with sales in dollars, down through cost of sales, expenses, and finally, the net profit figure. Now, in a business handling a great many transactions, selling quantities of merchandise at different prices, on different terms, from different sources, and under different conditions, what does the net profit figure tell us.

"It tells us just one thing; that we made a profit because our expenses and merchandise costs were less in total than the volume of sales. In business today with all of its complications and competition, is it enough for us to know merely that one thing? Most business men have learned, or are learning, from sad experience that they need to know a great deal more about the operations of their business than is disclosed by the ordinary operating statement. For example, inquisitive-minded business men might logically ask themselves the following questions regarding the net profit shown by their operating statement:

"What profit did each department make, and what percentage was that profit to the sales of the department and to the total profit of the business?

"How much of the net profit was contributed by individual salesmen?

"What was the profit on orders classified according to size?

"What is the average inventory investment by departments, and how does this compare with the cost of sales of these departments?

"How does the profit on individual classes of merchandise compare, and are there any classes of merchandise on which unsatisfactory margins of profit are being realized?

"Are the costs of doing business, which means overhead expenses, higher or lower than the average in the industry?

"These are typical questions which naturally arise in the brain of the business man when he is contemplating his operations, and the answers to these questions can be obtained only by the aid of accounting.

### Dual Cost Factor

"You gentlemen have the same problems in your industry, which your association is helping you to handle through the Dual Cost Factor. You are probably familiar with the method for the determination of the Dual Cost Factor in your own business. It was proved by surveys and analyses that the cost of doing business in the four major groups varied because of the variations in the expense of handling certain classes of business. The number of orders handled was found to have an important bearing on the expense of warehouse handling, cartage, delivery, and office expense, and that to determine the percentage of overhead to sales and to apply that to all sales of every description, was misleading and extremely inaccurate. It was found that to determine, with a reasonable degree of accuracy, the overhead cost of handling various classes of business it was necessary to apportion a certain amount of the expense on a percentage basis and a certain amount on the basis of so much an order. This more detailed costing of orders on the basis outlined by the Association is a refinement in the art of cost control.

"Ten or fifteen years ago, and, in fact, even now in some industries costs are figured on an average basis, which means

that total expenses are divided by the unit sales or production, whichever the case may be, and the result is the unit overhead cost. With the narrowing of profit margins and increasing competition among business men, it becomes necessary to develop a more accurate measure for determining costs, and your association has done a fine piece of work in presenting you with such complete detailed information as to the determination of costs in your individual businesses.

### Computing Costs by Classification

"Unless we have a proper basis for computing costs by classification, how can we reasonably compensate our salesmen on a basis which will be equitable to both parties? The mere fact that a salesman turns in a large quantity of orders does not necessarily indicate his worth to the company even though, on the surface, it would appear that he is a high grade and valuable man in the field. We have seen several instances of this inequality since we have been working on the problems of individual members of the association. I have in mind one particular case where, in analyzing the salesman's results for a specific month, we found that the net profit on his business amounted to approximately $1,500, and that his commission was $1,200, leaving only $300, or 20 per cent of the net operating profit for the employer.

"This does not seem a fair measure of the relative service rendered by the employer and by the salesman, since the employer in this case receives only 20 per cent of the operating profit for his share in supplying the capital and financing ability to carry on the business. Of course, this situation arose through the payment of commissions on the basis of gross profit, without a proper conception of the costs applicable to that particular salesman's business.

"In another case we found that one of the salesmen of a company was turning in a great many more orders than any of his fellow salesmen. An analysis of his sales and costs, the costs being figured on the basis of the Dual Control method, developed the information that the company was taking an actual loss on this salesman's business. With these situations present within your own industry, is it not true that proper accounting certainly is an aid to greater profits?

### Some Orders Unprofitable

"There has been another development in business within the past few years, to which I would call your attention in passing, and that is the realization that orders, in many instances, are distinctly unprofitable because of their size. Many business men have followed the theory that service to customers is the first and only consideration, and that it is necessary for them to fill every order that comes in regardless of its size or possible special character. This policy has been expensive and as to just how expensive it has been, the business executive has been in the dark more or less because of inaccurate or no cost records. We have known of several instances recently where large companies have made a hard and fast rule that orders under a certain volume will be handled in either one or two ways: (1) They are refused entirely, or (2) sold at a premium, the premium being figured on a basis sufficient to compensate the company for the extra expense in handling such a small order.

"You have seen the same situation develop in our commercial banks, where in many of the larger cities, banks have initiated the policy of making a service charge for monthly balances falling below a certain figure. This policy was adopted because investigations made by banking institutions showed them conclusively that it was costing more to handle accounts under certain size than the revenue which was derived from the use of the money. I am not advocating here any definite policy on the part of the members of this association in this respect, except to call attention to the situation and to point out the value of proper accounting control so that at least you will know how much you are losing on small volume business. Certainly unless you know the facts you will be in no position to define any policy.

### Modern Business Complicated

"I have said that modern business is complicated and that competition is keen. I think that you all agree on these points. Most of us make the mistake of further handicapping ourselves by complicated thinking, thereby adding greatly to our problems. Modern business may be broadly classified into two functions: buying and paying for, and selling and collecting for. It is true, of course, that in the carrying out of these functions many transactions pass through the hands of our executives and employees and many decisions of major importance have to be made. We can simplify our problems greatly by simple and direct thinking, which is only another name for common sense in business. Let us lick these problems and we have an excellent tool with which to work in the information supplied by the National association, which has already been referred to. The Dual Cost Factor is our opportunity and our weapon to control and simplify the problems of our business. We must use it intelligently, however, on a common sense basis because, after all, the problems of individual businesses, even in the same industry, offer peculiarities of their own which have to be studied and considered from the standpoint of common sense.

### Volume Variance Explained

"Cost accountants use the term 'volume variance' to indicate the difference betwen actual overhead expenses absorbed in sales and the total overhead expenses of the business. This is determined by establishing a normal rate for overhead expense and using this rate in costing sales on the theory that variations in volume do not affect the actual costs of handling business in the same proportion. It is true, of course, that as volume goes down, certain expenses can be scaled down correspondingly, but there are other expenses which must remain constant regardless of the volume of business, and it is these expenses which have such an important bearing in determining profits and losses which accrue to business as a result of fluctuations in the volume of sales. You have the same problem, undoubtedly, in your own industry, in your own individual businesses, and I think that in the determination of the Dual Cost Factors to be used by the individual concerns the question of normal expense should be carefully considered in setting up these cost factors.

"It is obvious that expenses, on a unit basis, increase when the volume is low and that when the volume is high the unit sales expenses are low. This is true because there is always a certain basic organization which must be maintained if a business is going to operate with any degree of efficiency, and as volume increases the expenses of the organization do not increase in proportion, and the same is true when the business decreases in volume.

### Effect on Profits of Business

"Now, the cost accountants have found that the effect of this volume variance on the profits of business can be measured with reasonable accuracy, and it certainly has an important bearing on the policy of the management in setting selling prices to know what the normal costs should be rather than to contend with the fluctuations which would certainly be evident if costs were figured on actual expenses, adjusted from month to month. The use of the Dual Cost Factor offers also an excellent check on the accuracy of the costs compiled by office employees. There is nothing any more disheartening in business than the figuring of costs to be used in the determination of selling prices or other managerial policies and to find later on that a serious error has been made by some clerk which materially alters the picture.

"Under the Dual Cost Factor, as outlined by the association, the paper merchant would cost all of his sales on that basis and would have a complete record of the cost of sales in the four major divisions, as well as the cost of sales of individual salesmen. An accurate check is then obtainable by the simple process

of adding the individual costs and comparing the resulting figure with the results as shown by the monthly operating statement. The only difference which should exist in this comparison would be that which might result from the volume variance, to which I have previously referred.

**Percentage of Profit on Sales**

"We hear business men speak of making a certain percentage of profit on sales, and I have been asked by clients to say what should be the proper ratio of profit to earn on the sales volume. Personally, I do not feel that this is the all-important factor. The starting point in the determination of profits should be the investment, because in the final analysis it is the profit we earn on the money we have invested which is the real measure of our efficiency. It is perfectly conceivable that some businesses could show a handsome profit on their investment if they made 5 per cent net on their sales; whereas, another business might show a very meagre return on its capital and yet make 10 per cent on its sales. Therefore, in considering the matter from this angle we can see how important it is to exercise the proper control of the money which we have invested, because the most successful businesses are those which make the desired profit on the smallest investment. This is referred to by statisticians as "turnover" —turnover of total assets, turnover of inventory, turnover of receivables, all indicate the rate at which these assets are being turned into cash and profits, and the higher the turnover rate, themore profit, generally speaking.

**Advantages of Perpetual Inventory Record**

"Your association has spoken about keeping a perpetual inventory record and has pointed out the advantages of this method. This is another one of the accounting aids to business which enables an executive to make more money by keeping his investment in inventories to a minimum and, in order to do that, he must have accurate and up-to-date records on the items in his inventory so that he can watch the turnover. This enables him to regulate his purchases and his standing investment. It guards against losses due to depreciation, and I think that it is obvious that the larger the investment in inventory, the greater the danger of depreciation, which is a loss we take outside of our regular business operations.

"I assume that you gentlemen are all receiving monthly statements of operations, changes in financial position, etc. These statements I believe to be an invaluable aid in making executive decisions and defining policies. They give the executives from month to month a basis for comparison of the sales, markups, turnovers, and profits of his various departments, and form the basis for better control. They also form the basis for comparing actual results with budget estimates and in checking out the variations between standard performance and actual results, in case the volume variance is much of a factor in the business. The monthly statement acts as a barometer on this important item.

**Uniform Accounting Methods**

"Uniform accounting methods which have been used by many industries, including your own, have been utilized to a great extent by associations in the compilation of comparative statistics. I mentioned a while ago that one of the questions a business man might logically ask himself is how his expenses and profits compare with the average in the industry. There is only one way in which he can determine that and that is by the dissemination of comparative data compiled through the Association or some other agency, and which he can use as a yardstick against his own figures.

"Many associations are doing this and it is handled in such a way that none of the individual members can identify the figures which are given them. This is accomplishd either by using symbols for the individual concerns or by grouping the figures into a general average. It has been our privilege, in a number of cases, to act as a clearing house for this statistical data, whereby we have taken monthly operating figures from various concerns in an industry and compiled them on a comparable basis for the benefit of all of the members of the group. It has a tremendous value which I feel is obvious, and I could recite many instances of substantial improvements made in profits by executives who have had the opportunity of knowing, in a general way, how their expenses and operations line up with other companies of a similar character. In fact, I know of no other way in which they could have obtained this information and the results which went with it.

"Years ago business men were prejudiced against this sort of thing because they felt this information furnished other concerns would be harmful to them. I think that the business man today realizes quite fully that instead of being harmful to him, it is of great benefit because it surely should be obvious that the competition you face in obtaining business is much fairer to you if your competing house knows its costs as well as you do and is, therefore, in a position to figure intelligently instead of guess work, because when a business man starts to guess as to his costs he usually guesses low because all he sees is the chance of obtaining an order, but if he knows exactly what his profit is going to be on the order, you will find a more stable price factor prevailing in the industry. I would like to have you gentlemen consider carefully the question of compilation of comparative figures for the benefit of the members of the New England Association as one step further toward greater profits."

## Kalbfleisch Corp. Buys A. Klipstein & Co.

Official announcement is made by the Kalbfleisch Corporation, a subsidiary of American Cyanamid Company, of the purchase of the assets and business of A. Klipstein & Co. and its subsidiary companies.

A. Klipstein & Co. are one of the leaders in the chemical field and have been in business since 1872. This company has extensive foreign connections and imports large quantities of foreign chemicals required in American industries, and maintains manufacturing facilities and laboratories, as well as distributing chemicals of American manufacture, from its branches located throughout the United States and Canada.

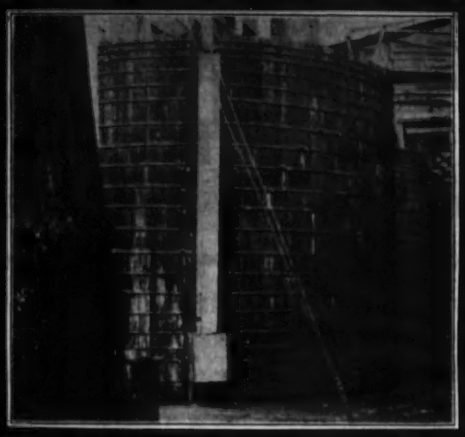
A. Klipstein & Co. are also large distributors of dyestuffs and this branch of the business will in the future probably be conducted under the general direction of the Calco Chemical Company, Inc., manufacturer of dyestuffs at Bound Brook, N. J., also a subsidiary of American Cyanamid Company.

The business of A. Klipstein & Co. will continue to be carried on by a separate corporate entity. August Klipstein and J. L. Schroeder will remain with the business. Mr. Klipstein is to be a vice-president, and Mr. Schroeder a vice-president and general manager of the new company, which will be headed by H. L. Derby as president.

Both Companies will move on January 1, 1931 to 535 Fifth avenue, New York City, in which building the American Cyanamid Company is located.

## Finch, Pruyn & Co. File Protest

GLEN FALLS, N. Y., November 17, 1930.—Finch, Pruyn & Co. has filed a complaint with the Interstate Commerce Commission claiming that the increase in one classification will more than offset the reduction in another class under the recent Eastern Class Rate decision. The petition was filed through George N. Ostrander, attorney for the company. Other members of the Northeastern New York Traffic Conference have also filed protests with the commission seeking modification of the rates. The recent decision resulted in increased rates in the first, second, third and fourth classification and reduced rates in the lower classes on railroads serving this section of the state. The railroads also objected to the decision and claimed that the reductions will consume any profits which might result from the increases. It was learned that the increases were fixed by the commission as a means of increasing the earnings of the railroads.



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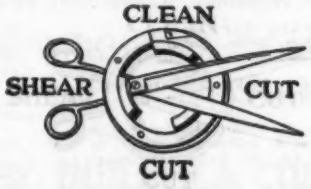


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# SLITTERS

# IMPORTS OF PAPER AND PAPER STOCK

## NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

## NEW YORK IMPORTS

WEEK ENDING NOVEMBER 15, 1930

### SUMMARY

Cigarette Paper .....726 cs.
Wall Paper .....38 bls., 19 cs.
Paper Hangings .....11 bls., 3 cs.
News Print .....1,648 rolls
Printing Paper .....248 cs.
Filter Paper .....1 ble., 18 cs.
Decalcomania Paper .....54 cs.
Drawing Paper .....18 rolls, 35 cs.
Metal Coated Paper .....77 cs.
Surface Coated Paper .....5 cs.
Baryta Coated Paper .....1 cs.
Photo Paper .....4 cs.
Coated Paper .....19 cs.
Basic Paper .....48 rolls
Detail Paper .....1 cs.
Writing Paper .....6 cs.
Envelopes .....28 cs.
Note Paper .....1 cs.
Letter Paper .....10 cs.
Colored Paper .....16 cs.
Parchment Paper .....16 rolls, 5 cs.
Tissue Paper .....15 cs.
Cover Paper .....3 cs.
Bowl Paper .....12 bls.
Pith Paper .....2 cs.
Stencil Paper .....1 cs.
Veneer Paper .....2 cs.
Silk Paper .....1 cs.
Straw Board .....800 pkgs.
Miscellaneous Paper .....127 cs.

CIGARETTE PAPER

De Manduit Paper Corp., Pipestone Co., Havre, 282 cs.
H. H. Strauss, Pipestone Co., Havre, 278 cs.
Standard Products Corp., France, Havre, 49 cs.
P. J. Schweitzer, Pr. Harrison, Marseilles, 117 cs.

WALL PAPER

C. Grimmer & Son, Berlin, Bremen, 1 cs.
Universal Car Loading Co., Berlin, Bremen, 1 cs.
S. Stern Stiner Co., Berlin, Bremen, 1 ble.
Kensington Wallpaper Co., Berlin, Bremen, 10 bls., 2 cs.
Irving Trust Co., A. Ballin, Hamburg, 4 cs.
Bendix Paper Co., A. Ballin, Hamburg, 1 cs.
Globe Shipping Co., A. Ballin, Hamburg, 11 bls.
Phoenix Shipping Co., A. Ballin, Hamburg, 2 cs.
W. H. S. Lloyd & Co., Rotterdam, Rotterdam, 3 cs.
F. J. Emmerich, Samaria, Liverpool, 7 bls., 1 cs.
R. F. Downing & Co., Olympic, Southampton, 3 cs.
F. J. Emmerich, New York, Hamburg, 1 cs., 5 bls.
Phoenix Shipping Co., New York, Hamburg, 2 bls.
Globe Shipping Co., New York, Hamburg 2 bls.

PAPER HANGINGS

A. C. Dodman Jr., Inc., Samaria, Liverpool, 6 bls.
Whiting & Patterson Co. Inc., Olympic, Southampton, 1 cs.
W. H. S. Lloyd & Co., American Banker, London, 5 bls., 2 cs.

NEWS PRINT

Perkins Goodwin & Co., Berlin, Bremen, 42 rolls.
J. Madden, Berlin, Bremen, 696 rolls.
Perkins Goodwin & Co., New York, Hamburg, 907 rolls.

PRINTING PAPER

Baldwin Paper Co., Berlin, Bremen, 69 cs.
Martin & Bechtold, A. Ballin, Hamburg, 14 cs.
———, A. Ballin, Hamburg, 6 cs.
E. Dietzgen & Co., Rotterdam, Rotterdam, 71 cs.
F. C. Strype, Rotterdam, Rotterdam, 7 cs.
T. N. Fairbanks, Inc., Extavia, Marseilles, 56 cs.
H. Reeve Angel & Co., Inc., Aurania, London, 1 cs.
Intl. Forwarding Co., H. Jasper, Antwerp, 11 cs.
Keuffel & Esser Co., Pr. Roosevelt, Hamburg, 12 cs.
E. Dietzgen & Co., New York, Hamburg, 1 cs.

FILTER PAPER

H. Reeve Angel & Co., Inc., Aurania, London, 3 cs.
C. Schleicher Shull Co., New York, Hamburg, 1 bl., 15 cs.

DECALCOMANIA PAPER

L. A. Consmiller, A. Ballin, Hamburg, 5 cs.
C. W. Sellers, A. Ballin, Hamburg, 28 cs.
L. A. Consmiller, Bremen, Bremen, 8 cs.
B. F. Drakenfeld & Co., Samaria, Liverpool, 10 cs (simplex); 3 cs (duplex).

DRAWING PAPER

Gallagher & Ascher, Rotterdam, Rotterdam, 5 cs.
Keuffel & Esser Co., Aurania, London, 2 cs.
H. Reeve Angel & Co., Inc., Aurania, London, 2 cs
Keuffel & Esser Co., Pr. Roosevelt, Hamburg, 26 cs., 18 rolls.

METAL COATED PAPER

K. Pauli Co., Berlin, Bremen, 21 cs.
Globe Shipping Co., Berlin, Bremen, 44 cs.
K. Pauli Co., A. Ballin, Hamburg, 12 cs.

SURFACE COATED PAPER

Hansel Bruckman & Lorbacher, A. Ballin, Hamburg, 3 cs.
Globe Shipping Co., A. Ballin, Hamburg, 1 cs.
Phoenix Shipping Co., New York, Hamburg, 1 cs.

BARYTA COATED PAPER

Globe Shipping Co., Bremen, Bremen, 1 cs.

PHOTO-PAPER

J. H. Schroeder Banking Corp., Bremen, Bremen, 4 cs.

COATED PAPER

Bank of America Natl. Assn., A. Ballin, Hamburg, 18 cs.
Bank of America Natl. Assn., New, York, Hamburg. 1 cs.

BASIC PAPER

C. Bruening Co., Rotterdam, Rotterdam, 48 rolls.

DETAIL PAPER

Globe Shipping Co., Bremen, Bremen, 1 cs.

WRITING PAPER

Schall & Co., France, Havre, 1 cs.
L. Bamberger & Co., Pr. Roosevelt, Hamburg, 5 cs.

ENVELOPES

J. Beckhard, Berlin, Bremen, 28 cs.

NOTE PAPER

H. Reeve Angel & Co., Inc., Aurania, London, 1 cs.

LETTER PAPER

Japan Paper Co., Vulcania, Trieste, 10 cs.

COLORED PAPER

S. Gilbert, Berlin, Bremen, 3 cs.
H. Lange, Bremen, Bremen, 1 cs.
J. Beckhard, Bremen, Bremen, 4 cs.
D. F. Young, New York, Hamburg, 8 cs.

PARCHMENT PAPER

Bendix Paper Co., A. Ballin, Hamburg, 5 cs.
W. Bersch, Rotterdam, Rotterdam, 16 rolls.
B. F. Drakenfeld & Co., Samaria, Liverpool, 7 cs.
W. J. Byrnes, Olympic, Southampton, 1 cs.
F. C. Strype, New York, Hamburg, 7 cs.

COVER PAPER

International F'd'g Co., A. Ballin, Hamburg, 3 cs.

BOWL PAPER

Hurley Johnson Corp., Samaria, Liverpool, 12 bls.

PITH PAPER

Nosawa & Co., Kwanto Maru, Kobe, 2 cs.

STENCIL PAPER

W. L. Newberry, Olympic, Southampton, 1 cs.

VENEER PAPER

———, Kwanto Maru, Yokohama, 2 cs.

SILK PAPER

Globe Shipping Co., Pr. Roosevelt, Hamburg, 1 cs.

STRAW BOARD

Walker Goulard Pleha Co., Rotterdam, Rotterdam, 800 pkgs.

MISCELLANEOUS PAPER

Hensel Bruckman & Lorbacher, Berlin, Bremen, 4 cs.
R. Wilson Paper Co., Transylvania, Glasgow, 38 cs.
Globe Shipping Co., Rotterdam, Rotterdam, 38 cs.
Keller Dorian Paper Co., France, Havre, 23 cs.
F. L. Kramer & Co., France, Havre, 19 cs.
Guibout Freres, France, Havre, 2 cs.
Japan Paper Co., France, Havre, 3 cs.
Whitfield Paper Works, Kwanto Maru, Kobe, 10 cs.

RAGS, BAGGINGS, ETC.,

Brown Bros., & Co., Bannack, Dublin, 66 bls., wastepaper.
T. D. Downing & Co., Transylvania, Glasgow, 82 bls., bagging.
Irving Trust Co., Rotterdam, Rotterdam, 61 bls., bagging.
Banco Com'l Italiane Trust Co., Extavia, Genoa, 76 bls. bagging.
J. Cohen & Son, Samaria, Liverpool, 11 bls. rags.
Darmstadt Scott & Courtney, Pipestone County, Dunkirk, 48 bls. rags.
Guaranty Trust Co., Pipestone County, Havre, 44 bls. bagging.
E. Butterworth & Co., Inc., Artigas, Manchester, 4 bls. paperstock.
Castle & Overton, Inc., Artigas, Manchester, 46 bls. rags.
E. J. Keller Co., Inc., Artigas, ———, 67 bls. bagging.
———, Portland Maru, Hamburg, 213 bls. rags.
Darmstadt Scott & Courtney, Cabo Santa Maria, Barcelona, 141 bls. bagging.
———, Pr. Roosevelt, Hamburg, 28 bls. rags.
Amtorg Trading Corp., Pr. Roosevelt, Hamburg, 369 bls. rags.

OLD ROPE

W. Steck & Co., Rotterdam, Rotterdam, 49 coils.
Chemical Bank & Trust Co., Extavia, Marseilles, 64 rolls.

CHINA CLAY

J. Dixon Crucible Co., New York, Hamburg, 400 bags, 20,280 kilos.

WOOD PULP BOARDS

Lagerloef Trading Co., A. Ballin, Hamburg, 136 rolls.
Lagerloef Trading Co., Korsholm, Kotka, 102 bls., 45 rolls.

PULPWOOD

Chase National Bank, Thirlby, Archangel, 3097 cords.
Chase National Bank, Sabella County, Archangel, 3157 cords.

WOOD PULP

Stora Kopperberg Corp., Malmen, Skutskar, 2000 bls. woodpulp.
Perkins Goodwin & Co., Malmen, Sundsvall, 625 bls. sulphate; 4550 bls. sulphite.
Scandinavian Pulp Agency, Inc., Malmen, Sundsvall, 250 bls. sulphite.
Johanson Wales & Sparre, Inc., Malmen, Sundsvall, 3750 bls. sulphite.
———, A Ballin, Hamburg, 133 bls. sulphite, 26 tons.
———, San Raphael, Tacoma, 300 tons woodpulp.
Harriman Bros., Portland Maru, Hamburg, 1024 bls. woodpulp, 150 tons.
———, Portland Maru, Hamburg, 128 bls. woodpulp, 25 tons.
Lagerloef Trading Co., Korsholm, Viborg, 520 bls. sulphite.
Lagerloef Trading Co., Korsholm, Kotka, 1020 bls. sulphite.

*(Continued on Page 68)*

# Union Screen Plate Company

Fitchburg, Mass., U. S. A. Lennoxville, P. Q., Canada

**UNION BRONZE**

SCREEN PLATES FOR FLAT SCREENS

6 SLOTS—5 SLOTS—4½ SLOTS—4 SLOTS—PER INCH

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**Old Plates Reclosed and Re-cut to Accurate Gauge**
**Rolled Phosphor Bronze and Copper Plates for Rotary Screens**

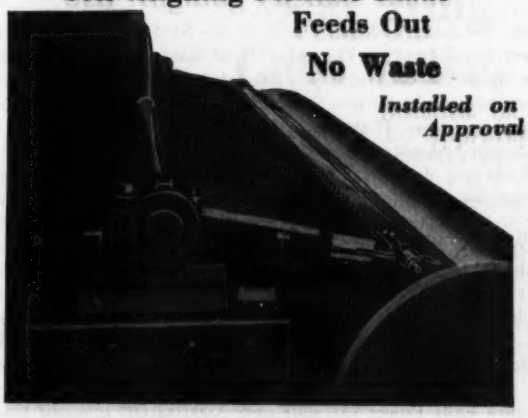
*Sole Manufacturers of the Union Witham Screen Plate Vat and Fastener*

## NO LEAKS — NO STREAKS

with the

## New Lodding Press Doctor

**Self Aligning Flexible Blade**
**Feeds Out**
**No Waste**
***Installed on Approval***



**EACH BLADE GUARANTEED TO FIT—AND GIVE AT LEAST 6 MONTHS SERVICE**

**LODDING ENGINEERING CO.**
**WORCESTER, MASS.**

**1864** **1930**

## "EXCELSIOR" FELTS

**for every grade of**

## PULP AND PAPER

We continue to maintain at the top the quality of Excelsior Felts, as we have done since we, as pioneers, made the first endless paper machine felts manufactured in America.

**Seamless felts for fast running.**
**Satin Style felts for finish.**
**Special felts to meet every condition.**
**Send us your felt problems.**

**KNOX WOOLEN COMPANY**
**CAMDEN, MAINE**

**SOLD BY**

**BULKLEY, DUNTON & COMPANY**
**75-77 Duane St., N. Y., and direct**

# GRIFFITH-HOPE

## Dispensing Cabinets
**AND**
## Fixtures
**ARE**
**The STANDARD of the PAPER TRADE**
**For Towels, Toilet, Napkins, Etc.**

**GRIFFITH-HOPE CO., West Allis, Wisc.**

# Imports of Paper and Paper Stock

*(Continued from Page 66)*

Bulkley Dunton & Co., Korsholm, ——, 3200 bls. woodpulp.
——, New York, Hamburg, 130 bls. woodpulp, 26 tons.
Castle & Overton, Inc., New York, Hamburg, 522 bls. woodpulp, 75 tons.
Guaranty Trust Co., New York, Hamburg, 309 bls. sulphite, 62 tons.

## ALBANY IMPORTS

WEEK ENDING NOVEMBER 15, 1930

Acer McLernon & Co., Dampfire, Chandler, 7386 bls. woodpulp, 1607 tons.

## PHILADELPHIA IMPORTS

WEEK ENDING NOVEMBER 15, 1930

——, San Raphael, Port Angeles, 500 tons woodpulp.
Tradesmans National Bank, Cabo Santa Maria, Barcelona, 107 bls. rags.
E. J. Keller Co., Inc., Cabo Santa Maria, ——, 55 bls. rags.
Chase National Bank, Kwanto Maru, Yohohama, 90 bls. rags.
R. Canovai & Sons, Exermont, Tunis, 514 bls. rags.
E. J. Keller Co., Inc., Cabo Torres, ——, 80 lbs. rags.
E. J. Keller Co., Inc., Wytheville, ——, 49 bls. rags.

## BOSTON IMPORTS

WEEK ENDING NOVEMBER 15, 1930

International Purchasing Co., Extavia, Genoa, 78 coils old rope.
Oxford University Press, Samaria, Liverpool, 5 cs. printing paper.
G. F. Malcolm Co., Samaria, Liverpool, 35 cs. gauze tissue paper.
Merchants National Bank, Pipestone County, Havre, 111 bls. rags.
Equitable Trust Co., Pipestone County, Havre, 14 bls. newcuttings.
1st National Bank of Boston, Pipestone County, Havre, 281 bls. newcuttings.
Irving Trust Co., Pipestone, County, Havre, 14 bls, pickers.
Brown Bros., & Co., Pipestone County, Havre, 112 coils old rope.
Brown Bros., & Co., Clara, Trieste, 65 coils old rope.
M. Gottesman & Co., Inc., Clara, Sebenico, 4240 bls. woodpulp.

## NEW ORLEANS IMPORTS

WEEK ENDING NOVEMBER 15, 1930

Canal Bank & Trust Co., Tergestea, Trieste, 82 bls. rags.

## BALTIMORE IMPORTS

WEEK ENDING NOVEMBER 15, 1930

Lagerloef Trading Co., Malmen, Rauma, 5,334 bls. wood pulp.
Perkins, Goodwin & Co., Malmen, Sundsvall, 3,375 bls. sulphate; 2,500 bls. sulphite.
W. H. Masson, West Eldara, Antwerp, 58 coils old rope.

## NORFOLK IMPORTS

WEEK ENDING NOVEMBER 15, 1930

Katzenstein & Keene, Inc., West Eldara, Antwerp, 105 bls. bagging.
Darmstadt, Scott & Courtney, West Eldara, Antwerp, 148 bls. bagging.

## Hawley to Distribute Own Lines

The HAWLEY PULP AND PAPER COMPANY announces to the Pacific Coast paper trade that effective November 20, it will distribute its complete line through its own sales department; its contract with the Graham Paper Company, as sales agents, terminating for the Pacific Coast states on that date.

Hawley news print, sulphites, manilas, butchers, tissues and fruit wraps will be available out of stock, together with a representative line of kraft wrappings and bags, from the mill at Oregon City, Ore.

Arthur J. Nelson, formerly with Blake, Moffitt & Towne, will represent the mill in northern California having offices in rooms 923-24 Robert Dollar Building, 311 California street, San Francisco; and N. L. Brinker, formerly with Zellerbach Paper Company and the El Rey Products Company of Los Angeles, will represent it in southern California, rooms 716-17 Washington Building, 311 South Spring street, Los Angeles. Sales representatives in the northwest will be Fred G. Statham, formerly of the Union Bag and Paper Company and Graham Paper Company, who will have offices in Seattle; and Edward A. O'Neill, formerly with the Oregon Pulp and Paper Company and the Western Paper Converting Company, of Salem, covering the Portland and Oregon territory and maintaining his sales office at the mill. The mill will have a trunk line on the Portland exchange, 14 miles away, to permit prompt communication with and from the trade.

The Graham Paper Company will continue to distribute Hawley products in the inter-mountain and eastern territories, the change taking place on the coast only to effect economies in sales costs and to permit the mill to better serve the jobbing trade and maintain closer contacts. Approximately 70 per cent of the Hawley tonnage is distributed in the three Pacific coast states.

## F. L. Carlisle Speaks on Industrial Upbuilding

[FROM OUR REGULAR CORRESPONDENT]

WATERTOWN, N. Y., November 17, 1930.—At a gathering of business men, paper mill manufacturers and merchants of the city held in the Chamber of Commerce rooms this week an interesting address was given by F. L. Carlisle, president of the St. Regis Paper Company, on methods to be pursued in building up this territory from an industrial standpoint. He called attention to the benefits which would also be derived from the proposed development of the power in the St. Lawrence River.

"There are two ways to build up Watertown and Northern New York," he said, "and one relates to the St. Lawrence River water power development. The other is in making the inland streams flow constantly because if you have that it will not be necessary to offer inducements to new industries. In fact it would be hard to keep them away. If the St. Lawrence is developed Northern New York will undoubtedly get the major benefit because power can be sold cheaper there near the source of supply than anywhere else. I hope the development of that power can build up the industrial life of this section and I believe it can.

"We have mighty little help from those people who criticize us in the things we do. I am proud to be the head of a power company that sells electricity cheaper than any other country in the world. The St. Regis happens to own a mill in Tacoma, Washington, where we buy our power from the city, being the only concern to do so. There is a string of mills across Puget Sound near that city but they won't buy Tacoma power. Why gentlemen, the Niagara Falls Power Co. sells over 3,000,000,000 kilowatt hours a year at less than three mills; at less price than you are paying for power in this city. If everybody can get a new industry to come here we will relay what power we have now besides aiding them in whatever is necessary to build them up."

## Unity Paper Mills to Reorganize

POTSDAM, N. Y., November 17, 1930.—It was announced this week that plans for a reorganization of the Unity Paper Mills will have been virtually completed and a statement from officials is expected to be made public within a few days. Bernard Wade and Hollis Martin were appointed receivers for the firm several months ago in an order issued by Federal Judge Bryant and since that time the plant has been operated under their supervision. It is reported that an amicable settlement has been reached with the holders of the first and second mortgage on the property and also with the other creditors which undoubtedly will prove satisfactory to the court authorities. It is said that sufficient funds have already been raised to provide for the reorganization plans and the continuous operation of the mill. Although only one paper machine is housed in the mill it nevertheless furnishes steady employment to a large number of local residents and the announcement that operations would be continued was welcomed. A recent report issued by the company showed that the business has been conducted in a profitable basis under the new management since the financial difficulties were encountered.

# 3 FEATURES of our "TOP FELTS for BOARD MACHINES"

A Trial Felt for Your Machines Will Prove These Facts.

THE WATERBURY FELT CO., SKANEATELES FALLS, N.Y.

# FAIRBANKS

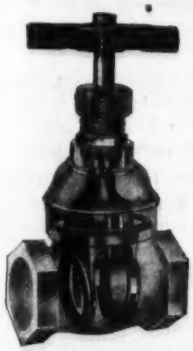


Fig. 0201

## Renewable Seat Ring Gate Valves

are built to give service under the most severe conditions.

The renewable features have been perfected, are simple and may be relied upon as being entirely effective.

Renewals can be easily and quickly made, when necessary, without taking the valve from the pipe line.

Screw End and Flange End types.
Made in Bronze or of metals to meet special conditions.
Good for 150 lb. Steam Working Pressure

*Write for Descriptive Bulletin and No. 20 Valve Catalog.*

THE FAIRBANKS COMPANY
BOSTON NEW YORK PITTSBURGH
*Distribution in All Principal Cities.*

# West Virginia Pulp and Paper Company

*Manufacturers of*

SUPERCALENDERED
and
MACHINE FINISHED BOOK
and LITHOGRAPHIC
PAPERS

Offset, Envelope, Bond, Writing, Cover and Music Paper, High Grade Coated Book, Index Bristol, Post Card, Kraft and Label Papers.

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Bleached Spruce Sulphite and Soda, Kraft Pulp

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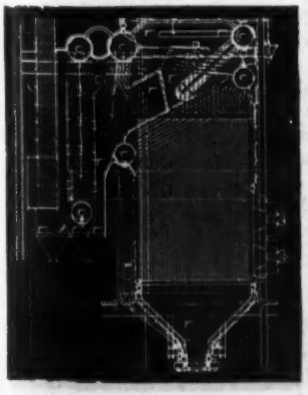
503 Market St., San Francisco, Cal.
Sixth and Chestnut Sts., Philadelphia, Pa.



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installed in some of the largest pulp and paper mills in the United States and Canada

MAXIMUM STEAM
AT
HIGHEST EFFICIENCY
WITH
LEAST CAPITAL INVESTMENT and OPERATING COSTS

Result:—Enormous savings in cost of pulp and paper produced.

BADENHAUSEN CORPORATION
General Offices and Works
CORNWELLS HEIGHTS (PHILA.), PA.

## New York Market Review

Office of the PAPER TRADE JOURNAL,
Wednesday, November 19, 1930.

The general situation in the local paper market remains unchanged, with all grades quoted at approximately the previous price levels, and request holding fair throughout the field.

Shipments of news print go forward steadily, and production is maintained in proportion to the demand. Contracts for 1931 are now being considered, with prices to be decided upon within thirty days.

Fine grades of paper are selling moderately well, while the coarser varieties move at a somewhat slower pace.

### Mechanical Pulp

The ground wood pulp market shows no unusual activity. Quotations remain as of last week, with movement into consumption, continuing fairly strong.

### Chemical Pulp

Request for chemical pulp in some quantity is noted since the curtailing of production by a group of foreign mills, and prices are firm.

### Old Rope and Bagging

Gunny still shows slightly increased demand, and quotations hold to last week's levels. Trading in old rope was along routine lines.

### Rags

No unusual offerings of rags, either old or new, are heard of in the local market. A somewhat slow condition prevails, with foreign rags in fair demand, and domestic selling at lower prices

### Waste Paper

The grades of waste paper which show activity this week are the hard white shavings, hard white envelope cuttings, manila cuttings, and white blank news, as well as soft white shavings No. 1. All of these go well, while the other varieties are somewhat slow. Prices are unchanged in most instances.

### Twine

Quotations on twine hold steady, with demand somewhat better as a result of the coming holidays.

## New International Core Splicing Machine

The Montague Machine Works, Turners Falls, Mass., has just issued Bulletin CS-1 describing the new International Core Splicing Machine which it has just placed on the market.

The new machine is precision built for high speed and ball bearings are used throughout with minor exceptions. It is furnished complete with motor, exhaust fan and belting if desired or these can be provided by the Purchaser if preferred.

The capacity is governed of course by the skill of the operator and condition of the cores but, from observation, 1000 splices a day of eight hours can be taken as a fair average. This covers the preparation of the cores only. Joining of the splice is a separate operation. Core sections as short as 14 inches can be prepared for splicing.

The bulletin which completely describes the new machine may be had upon application to the company.

## Boston Paper Trade Happenings

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., November 17, 1930—A meeting of the junior salesmen of Storrs & Bement Company was held Friday evening at the office of the company. Mr. Stepp, of the sales promotion department of the S. D. Warren Company, spoke in regard to papers made by that company, advertising and sales helps. He was preceded by R. S. Guilfoy, manager of the sales service department of Storrs & Bement Company, who spoke on the sales service department activities. A meeting of the senior sales department of Storrs & Bement Company is to be held November 21. W. N. Stetson, Jr., president of the company, is to speak.

The Holyoke Card and Paper Company are promoting the sale of their Tint-cote Bond by an attractive mailing piece being sent to the New England consumers. The New England distributors are John Carter & Co., Inc., and Storrs & Bement Company.

Carter, Rice & Co. Corp., exclusive New England distributors for Crocker-Burbank's book papers, are sending to paper users throughout New England a circular and reference book containing information about these lines. They include Hermes Book, English finish; Elseca Book, super-calendered, and Saturn book, antique wove and laid.

Knight, Allen & Clark, Inc., are stocking some new envelopes, improved catalogue mailers in Indian and white in the various sizes.

Grellet Collins, president, and W. R. Maull, vice-president of Dill & Collins Company, Philadelphia, called on John Carter & Co., Inc., distributors of their lines, last week.

## Superintendents To Meet at Dayton, June 4-6

At a meeting of the Dayton Convention Committee headed by Tom Harvey of the Gardner & Harvey Company of Middletown, Ohio, for the twelfth annual convention of the American Pulp and Paper Mill Superintendents Association, the Dayton Biltmore Hotel was chosen for headquarters. This hotel is a new one and is amply large to take care of the entire convention, without using outside meeting rooms.

Mr. Harvey has not completed his list of men who will head the various committees, but he has chosen Herbert T. Randall of the Champion Coated Paper Company of Hamilton, Ohio to head the finance committee which will arrange for financing the meeting. Frank R. Henry of the Simonds, Worden White Company of Dayton, Ohio will be chairman of the arrangements and for the golf tournament which will be scheduled for Wednesday afternoon, June 3. Wilson W. Galloway of the Hager Straw Board and Paper Company, Ceaderville, Ohio will arrange for the mill visits during the convention. Thomas H. Keogh, formerly with the Mead Pulp and Paper Company and a man who enjoys a wide circle of friends throughout the United States among the Superintendents will look after the reception committee work. Other committee heads will be appointed soon and announced later.

Harold A. Harvey of the Enterprise Machine Company of Middletown, Ohio will act as secretary to the convention chairman, with headquarters in Middletown, Ohio.

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*Laboratories and Experimental Mill*

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Consultation, reports, valuations, and complete designs and engineering supervision for the construction and equipment of

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HEADERS ... RECEIVERS ... SEPARATORS
COMPLETE POWER PLANT PIPING

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## GIANT

RAGS — BURLAP
BAGGING — ROPE
JUTE BUTTS, MAGAZINES, CATALOGS
OLD PAPERS, THREAD WASTE AND
ALL GRADES OF RAGS
CUT QUICKLY AND EFFICIENTLY
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GIANT
RIEGELSVILLE, N. J. U.S.A.

This is the GIANT 2A CUTTER WITH A CAPACITY OF 3000 lbs. PER HOUR
GIANT RAG CUTTERS HAVE CAPACITIES OF FROM 1 to 5 tons per hour.

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SOLE AGENTS FOR EUROPE
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# Miscellaneous Markets

Office of the PAPER TRADE JOURNAL,
Wednesday, November 19, 1930.

BLANC FIXE.—A fairly active condition is displayed by the blanc fixe market, with pulp now quoted at approximately $48.50 to $50.00 per ton, and powder selling at 3¾ to 4½ cents per pound at works, in barrels.

BLEACHING POWDER.—The extension of contracts on bleaching powder continues, with shipments going forward at a good pace. Prices hold at $2.00 to $2.35 per 100 pounds, in drums, at works.

CASEIN.—The market for casein exhibits a moderate amount of activity, with domestic standard ground still priced at 10 cents. Finely ground goes for 12½ cents per pound, in the domestic grade, while Argentine standard ground sells for 11½ cents, and finely ground at 12 cents per pound,—car lot quantities, in bags.

CAUSTIC SODA.—Demand for caustic soda remains fair, with prices steady at $2.90 for the solid, with ground and flake at $3.30 per 100 pounds, at works, in large drums.

CHINA CLAY.—The china clay market is unchanged. Contracts have been made on the 1930 basis, and prices remain at $15 to $25 per ton for imported grades, ship side, with domestic clays going for from $8 to $13 per ton, at mine.

CHLORINE.—A firm condition prevails in the chlorine market this week, and prices range from $2.35 to $2.40 per 100 pounds, in tanks, or multi-unit cars, at works, in ton lots or more. Chlorine is in fair request.

ROSIN.—Slight change is noted in the rosin market. The gum rosin is quoted at from $5.45 to $5.55 per 280 pounds, in barrels, at yard, with wood rosin at $4.66 per 280 pounds, in car lots, at works.

SALT CAKE.—Buying of salt cake continues in fair quantity, although no large offerings are being made, and a generally firm tone is prevalent. Chrome is priced at $16 to $17 per ton, in bulk, at works, with salt cake going for $17 to $18.

SODA ASH.—Contracts for soda ash are being solicited on the 1930 price basis. Request for this product is slightly stronger, and prices are $1.32 per 100 pounds, at works, in bags, $1.55 in barrels, both in car lots.

STARCH.—Seasonal movement of starch continues, with special paper making starch being sold for $3.62 per 100 pounds, in bags, or $3.89 in barrels.

SULPHATE OF ALUMINA.—Somewhat increased demand is noted in the market for sulphate of alumina. Iron free is selling at $1.95 to $2.00 per 100 pounds, with commercial grades at $1.45 to $1.50, both in barrels, at works.

SULPHUR.—No fluctuation is seen in the sulphur market. Quotations are $18 per ton, on contract for 1,000 tons or more, at mine. $20 per ton is the price for smaller amounts, while spot and nearby car lots are $21 per ton. A slight upward tone is felt in this market at present.

TALC.—Domestic grades of talc for paper making are selling at $16 to $18 per ton, in bulk. The imported grades range from $18 to $20 per ton, ship side, in bags. Talc is in fair request.

## Norwegian Mills Operating Below Capacity

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 19, 1930—Norwegian pulp and paper mills are operating below capacity, according to a cablegram from Commercial Attache Lund at Oslo. Prices are weak and continue at unsatisfactory levels. It is hoped, says the cable, that the production agreement among northern and central European sulphite manufacturers, if ratified, will improve the position of unbleached sulphite pulp, the 1930 production of which has not been entirely sold out. The mechanical groundwood market is remaining fairly firm, with production in the three northern countries further reduced to avoid overstocking.

# Market Quotations

### Paper
(F. o. b. Mill)

| | |
|---|---|
| Ledgers | 11.00 @ 38.00 |
| Bonds | 6.75 @ 53.25 |
| **Writings—** | |
| Extra Superfine | 14.00 @ 32.00 |
| Superfine | 14.00 @ 32.00 |
| Tub sized | 10.00 @ 15.00 |
| Engine sized | 6.75 @ 11.00 |
| **Book, Cased—** | |
| S. & S. C. | 6.00 @ 7.50 |
| M. F. | 5.75 @ 7.00 |
| Coated and Enamel | 7.50 @ 12.00 |
| Lithograph | 7.50 @ 12.00 |
| **Tissues—Per Ream—** | |
| White No. 1 | .65 @ .67½ |
| Anti-Tarnish M G only | .65 @ .70 |
| Colored | .70 @ .90 |
| White No. 2 | .55 @ .57½ |
| Kraft | .65 @ .70 |
| Manila | .55 @ .57½ |
| **Kraft—** | |
| No. 1 Domestic | 5.25 @ 6.25 |
| No. 2 Domestic | 3.75 @ 4.50 |
| Southern | 3.50 @ 3.75 |
| Imported | 6.00 @ 7.00 |
| **Manila—** | |
| No. 1 Jute | 9.00 @ 9.25 |
| No. 2 Jute | 7.75 @ 8.50 |
| No. 1 Wood | 4.00 @ 5.25 |
| No. 2 Wood | 3.50 @ 4.00 |
| Butchers | 3.37½ @ — |
| **Fibre Papers—** | |
| No. 1 Fibre | 4.25 @ 5.50 |
| No. 2 Fibre | 4.00 @ 4.75 |
| Common Bogus | 1.50 @ 3.00 |
| Screenings | 2.00 @ 3.00 |
| Card Middles | 4.00 @ 5.00 |
| **Glassine—** | |
| Bleached, basis 25 lbs. No. 1 | .11 @ — |
| Bleached, basis 20 lbs., No. 2 | .09¾ @ — |
| (Delivered New York) | |
| **News, per ton—** | |
| Rolls, contract | 62.00 @ — |
| Rolls, spot | 62.00 @ — |
| Sheets | 67.00 @ — |
| Side Runs | 47.00 @ 52.00 |
| **Boards—per ton—** | |
| News | 30.00 @ 32.50 |
| Straw | 40.00 @ 45.00 |
| Chip | 27.50 @ 30.00 |
| Binders' Boards | 65.00 @ 70.00 |
| 85 Test Jute Liner | 38.00 @ 40.00 |
| Sgl. Mla. Ll. Chip | 42.50 @ 45.00 |
| (F. o. b. Mill) | |
| Wood Pulp Boards | 70.00 @ 80.00 |

### Mechanical Pulp
(On Dock)

| | |
|---|---|
| **No. 1 Imported—** | |
| Moist | 28.00 @ 30.00 |
| Dry | 30.00 @ 32.00 |
| (F. o. b. Mill) | |
| No. 1 Domestic | 26.00 @ 30.00 |

### Chemical Pulp
(On Dock, Atlantic Ports)

| | |
|---|---|
| **Sulphite (Imported)—** | |
| Bleached | 3.00 @ 4.25 |
| Easy Bleaching | 2.60 @ 2.80 |
| No. 1 strong unbleached | 2.10 @ 2.65 |
| Mitscherlich unbleached | 2.25 @ 2.85 |
| No. 2 strong unbleached | 2.10 @ 2.35 |
| No. 1 Kraft | 1.65 @ 1.90 |
| No. 2 Kraft | 1.55 @ 1.65 |
| **Sulphate—** | |
| Bleached | 3.40 @ 3.85 |
| (F. o. b. Pulp Mill) | |
| **Sulphite (Domestic)—** | |
| Bleached | 2.65 @ 4.75 |
| Easy Bleaching Sulphite | 2.55 @ 2.75 |
| News Sulphite | 2.35 @ 2.60 |
| Mitscherlich | 2.75 @ 3.25 |
| Kraft (Domestic) | 2.10 @ 2.75 |
| Soda Bleached | 2.90 @ 3.20 |

### Domestic Rags
New Rags
(Prices to Mill f. o. b. N. Y.)

| | |
|---|---|
| **Shirt Cuttings—** | |
| New White, No. 1 | 8.00 @ 8.50 |
| New White, No. 2 | 7.00 @ 7.25 |
| Silesias No. 1 | 6.50 @ 7.00 |
| New Unbleached | 8.25 @ 9.00 |
| New Blue Prints | 5.25 @ 5.50 |
| New Soft Blacks | 4.00 @ 4.50 |
| Blue Overall | 6.25 @ 6.50 |
| Washables | 4.25 @ 4.75 |
| Fancy | 4.75 @ 5.25 |
| Mixed Khaki Cuttings | 4.75 @ 5.25 |
| Pink Corset Cuttings | 7.50 @ 8.00 |
| O. D. Khaki Cuttings | 5.15 @ 5.75 |
| Men's Corduroy | 3.50 @ 4.00 |
| New Mixed Blacks | 3.25 @ 3.50 |

Old Rags

| | |
|---|---|
| **White, No. 1—** | |
| Repacked | 5.25 @ 5.75 |
| Miscellaneous | 4.25 @ 4.75 |
| **White, No. 2—** | |
| Repacked | 3.00 @ 3.50 |
| Miscellaneous | 2.30 @ 2.50 |
| St. Soiled, White | 1.50 @ 1.75 |
| **Thirds and Blues—** | |
| Repacked | 2.25 @ 2.50 |
| Miscellaneous | 1.65 @ 1.85 |
| **Black Stockings** | 3.25 @ 3.75 |
| **Roofing Rags—** | |
| Cloth Strippings | 1.25 @ 1.30 |
| No. 1 | 1.25 @ 1.30 |
| No. 2 | .90 @ 1.00 |
| No. 3 | .70 @ .80 |
| No. 4 | .65 @ .70 |
| No. 5A | .50 @ .60 |

### Foreign Rags
New Rags

| | |
|---|---|
| New Dark Cuttings | 2.30 @ 2.50 |
| New Mixed Cuttings | 2.25 @ 2.75 |
| New Light Silesias | 6.25 @ 6.50 |
| Light Flannelettes | 6.50 @ 7.00 |
| Unbleached Cuttings | 9.00 @ 9.50 |
| New White Cuttings | 7.50 @ 8.00 |
| New Light Oxfords | 6.00 @ 6.50 |
| New Light Prints | 4.75 @ 5.25 |

Old Rags

| | |
|---|---|
| No. 1 White Linens | 7.50 @ 8.00 |
| No. 2 White Linens | 5.75 @ 6.75 |
| No. 3 White Linens | 4.75 @ 5.25 |
| No. 4 White Linens | 3.00 @ 3.50 |
| No. 1 White Cotton | 5.50 @ 5.75 |
| No. 2 White Cotton | 4.50 @ 5.00 |
| No. 3 White Cotton | 3.00 @ 4.00 |
| No. 4 White Cotton | 1.70 @ 1.80 |
| Extra Light Prints | 2.75 @ 3.00 |
| Ord. Light Prints | 2.15 @ 2.40 |
| Med. Light Prints | 1.65 @ 1.75 |
| Dutch Blue Cottons | 2.00 @ 2.10 |
| French Blue Linens | 2.65 @ 2.75 |
| German Blue Linens | 2.25 @ 2.40 |
| German Blue Cottons | 1.85 @ 1.90 |
| Checks and Blues | 1.85 @ 1.90 |
| Lindsay Garments | 1.20 @ 1.30 |
| Dark Cottons | 1.00 @ 1.10 |
| Old Shopperies | .95 @ 1.00 |
| New Shopperies | .95 @ 1.05 |
| French Blues | 1.90 @ 2.00 |

### Old Rope and Bagging
(Prices to Mill f. o. b. N. Y.)

| | |
|---|---|
| Gunny No. 1— | |
| Foreign | 1.55 @ 1.65 |
| Domestic | 1.65 @ 1.75 |
| Wool Tares, light | 1.35 @ 1.45 |
| Wool Tares, heavy | 1.40 @ 1.45 |
| Bright Bagging | 1.35 @ 1.45 |
| Small Mixed Rope | .90 @ 1.00 |
| **Manila Rope—** | |
| Foreign | 2.75 @ 3.00 |
| Domestic | 3.25 @ 3.50 |
| New Burlap Cut | 2.25 @ 2.50 |
| **Hessian Jute Threads—** | |
| Foreign | 3.50 @ 4.00 |
| Domestic | 2.50 @ 2.75 |

### Old Waste Papers
(F. o. b. New York)

| | |
|---|---|
| **Shavings—** | |
| Hard, white, No. 1 | 3.00 @ 3.10 |
| Hard, white, No. 2 | 2.40 @ 2.50 |
| Soft, white, No. 1 | 2.70 @ 2.80 |
| White envelope cuttings | 3.00 @ 3.10 |
| **Flat Stock—** | |
| Stitchless | .95 @ 1.05 |
| Overissue Mag. | .95 @ 1.05 |
| Solid Flat Book | .80 @ .95 |
| Crumpled No. 1 | .70 @ .85 |
| Solid Book Ledger | 1.90 @ 2.00 |
| Ledger Stock | .85 @ 1.25 |
| New B. B. Chips | .30 @ .35 |
| **Manilas—** | |
| New Env. Cut. | 2.10 @ 2.25 |
| New Cuttings | 1.50 @ 1.65 |
| Extra No. 1 old | 1.25 @ 1.35 |
| Print | .60 @ .65 |
| Bogus Wrapper | .60 @ .65 |
| Container | .35 @ .45 |
| **Old Kraft Machine—** | |
| Compressed bales | 1.35 @ 1.45 |
| **News—** | |
| No. 1 White News | 1.80 @ 1.90 |
| Strictly Overissue | .45 @ .50 |
| Strictly Folded | .35 @ .40 |
| No. 1 Mixed Paper | .25 @ .30 |
| Common Paper | Nominal |

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## Twines
(F. o. b. Mill)

| | | | |
|---|---|---|---|
| **Cotton—** | | | |
| No. 1 | .22 | @ | .24 |
| No. 2 | .21 | @ | .22 |
| No. 3 | .19 | @ | .20 |
| B. C., 18 basis | .32 | @ | .34 |
| A. Italian, 18 basis | .39 | @ | .40 |
| Finished Jute— | | | |
| Dark 18 basis | .20½ | @ | .21 |
| Light 18 basis | .22½ | @ | — |
| Jute Wrappings, 3-6 Ply— | | | |
| No. 1 | .14¾ | @ | — |
| No. 2 | .13¾ | @ | — |
| Tube Rope— | | | |
| 4-ply and larger | .10¼ | @ | — |
| Fine Tube Rope— | | | |
| 4-ply | .12¾ | @ | — |
| 3-ply | .13¾ | @ | — |
| 2-ply | .14¾ | @ | — |
| Paper Makers Twine Balls | .08¾ | @ | — |
| Box Twine, 2-3 ply | .09 | @ | .10 |
| Jute Rope | .11 | @ | .12 |
| Amer. Hemp, o | .29 | @ | .31 |
| Java Sisal | | | |
| No. 1 Basis | .14½ | @ | .15½ |
| No. 2 Basis | .13½ | @ | .14½ |
| New Zealand Sisal | .13½ | @ | .15½ |
| Sisal Lath Yarn— | | | |
| No. 1 | .14 | @ | .16 |
| No. 2 | .12 | @ | .14 |
| Manila Twine | .22½ | @ | .24½ |

# CHICAGO

## Paper
(F. o. b. Mill)

| | | | |
|---|---|---|---|
| Rag Bond | .30 | @ | .53¾ |
| Water Marked Sulphite Bond | .09 | @ | .12 |
| Sulphite Bond | .06¾ | @ | .11 |
| Superfine writing | .18 | @ | .24 |
| No. 1 fine writing | .14 | @ | .18 |
| No. 2 fine writing | .12 | @ | .14 |
| No. 3 fine writing | .08½ | @ | .12 |
| No. 1 M. F. Book | .06½ | @ | .07½ |
| No. 2 M. F. Book | .05¾ | @ | .06¾ |
| No. 1 S.&S.C. Book | .06¾ | @ | .07¾ |
| No. 2 S.&S.C. Book | .05¾ | @ | .06½ |
| Coated Book | .07½ | @ | .12 |
| Coated Label | .07½ | @ | .10 |
| No. 1 Manila | .04¾ | @ | .05¾ |
| No. 1 Fibre | .04¾ | @ | .05¾ |
| No. 2 Manila | .04¼ | @ | .04¾ |
| Butcher's Manila | .04 | @ | .04½ |
| No. 1 Kraft | 5.00 | @ | 5.50 |
| Southern Kraft | 3.75 | @ | 4.00 |
| No. 2 Kraft | 3.75 | @ | 4.00 |
| Wood Tag Boards | .04¾ | @ | .06½ |
| Sulphite Screenings | .03 | @ | .03¾ |
| Manila Tissue— | | | |
| 24x36 Sheet | .07 | @ | .07¼ |
| White Tissue— | | | |
| 20x30 Sheet | .07¼ | @ | .07½ |

(Delivered Central Territory)

| | | | |
|---|---|---|---|
| News, per ton— | | | |
| Rolls, contract | 62.00 | @ | — |
| Sheets | 67.00 | @ | — |
| Boards, per ton— | | | |
| Plain Chip | 30.00 | @ | 35.00 |
| Solid News | 37.50 | @ | — |
| Solid News | 32.50 | @ | 37.50 |
| Manila Lined Chip | 40.00 | @ | 45.00 |
| Container Lined— | | | |
| 85 Test | 50.00 | @ | 55.00 |
| 100 Test | 55.00 | @ | 60.00 |

## Old Papers
(F. o. b. Chicago)

| | | | |
|---|---|---|---|
| Shavings— | | | |
| No. 1 Hard White | 2.35 | @ | 2.40 |
| White Env. Cut- | | | |
| No. 1 Soft Shavings | 2.10 | @ | 2.15 |
| No. 1 Mixed | .30 | @ | .35 |
| No. 2 Mixed | .25 | @ | .35 |
| Ledger & Writings | .90 | @ | .95 |
| Solid Books | .90 | @ | .95 |
| Blanks | 1.60 | @ | 1.65 |
| Kraffs | 1.30 | @ | 1.40 |
| New Kraft Cuts | 1.50 | @ | 1.70 |
| Manila Envelope Cuttings | 1.65 | @ | 1.70 |
| Ex. No. 1 Manila | 1.30 | @ | 1.45 |
| Print Manila | .45 | @ | .50 |
| Folded News (overissue | .40 | @ | .45 |
| Old Newspapers— | | | |
| No. 1 | .35 | @ | .40 |
| No. 2 | .30 | @ | .35 |
| Mixed Papers— | | | |
| No. 1 | .30 | @ | .35 |
| Roofing Stocks— | | | |
| (F. o. b. Chicago, net cash) | | | |
| No. 1 | 30.00 | @ | — |
| No. 2 | 28.00 | @ | — |

# PHILADELPHIA

## Paper
(F. o. b. Mill)

| | | | |
|---|---|---|---|
| Bonds | .05 | @ | .40 |
| Ledgers | .08 | @ | .40 |
| Writings— | | | |
| Superfine | .12½ | @ | .18 |
| Extra fine | .18 | @ | .22 |
| Fine | .17 | @ | .26 |
| Fine, No. 2 | .15 | @ | .25 |
| Fine, No. 3 | .09 | @ | .20 |
| Book, M. F. | .05 | @ | .07 |
| Book, S. S. & C. | .05 | @ | .07½ |
| Book, Coated | .09 | @ | .16 |
| Coated Lithograph | .07 | @ | .11 |
| Label | .07 | @ | .11 |
| No. 1 Jute Manila | .07 | @ | .09 |
| Manila Sul., No. 1 | .03½ | @ | .05½ |
| Manila No. 2 | .03 | @ | .04 |
| No. 1 Kraft | .05¼ | @ | .06 |
| No. 2 Kraft | .03½ | @ | .04 |
| Southern Kraft No. 1 | — | @ | .03¾ |
| Southern Kraft No. 2 | — | @ | .03½ |
| Common Bogus | .03 | @ | .04 |

(Delivered Philadelphia)

| | | | |
|---|---|---|---|
| News Print Rolls | 62.00 | @ | — |
| Straw Board | 52.50 | @ | 70.00 |
| News Board | 32.50 | @ | 35.00 |
| Chip Board | 30.00 | @ | 32.00 |
| Wood Pulp Board | 85.00 | @ | 95.00 |
| Binder Boards— | | | |
| No. 1, per ton | 75.00 | | |
| No. 2, per ton | 70.00 | | |
| Carload lots | 68.00 | @ | 70.00 |
| Tarred Felts— | | | |
| Regular | 55.50 | @ | 57.00 |
| Slaters (per roll) | .84 | @ | .94 |
| Best Tarred, 1-ply (per roll) | 1.95 | @ | 2.10 |
| Best Tarred, 2-ply (per roll) | 1.50 | @ | 1.60 |
| Best Tarred, 3-ply | 2.00 | @ | 2.25 |

## Domestic Rags (New)
(Price to Mill, f. o. b. Phila.)

| | | | |
|---|---|---|---|
| Shirt Cuttings— | | | |
| New White, No. 1 | .09 | @ | .09½ |
| New White, No. 2 | .07 | @ | .07½ |
| Light Silesias | .07 | @ | .07½ |
| Silesias, No. 1 | .07 | @ | .09 |
| Black Silesia, soft | .05 | @ | .05½ |
| New Unbleached | .08½ | @ | .09 |
| Washable, No. 1 | .04½ | @ | .05 |
| Blue Overall | .07½ | @ | .08 |
| Cottons—According to grades— | | | |
| Washable, No. 2 | .03 | @ | — |
| New Blue | .03 | @ | .03½ |
| Fancy | .05 | @ | .05½ |
| New Black, Soft | .05 | @ | .05¾ |
| New Light Seconds | .02½ | @ | .03 |
| New Dark Seconds | 1.85 | @ | 2.00 |
| Khaki Cuttings— | | | |
| No. 1 O. D. | .05½ | @ | .05¾ |
| No. 2 Mixed | .04½ | @ | .04¾ |
| Corduroy | .03 | @ | .03½ |
| New Canvas | .08½ | @ | .09 |
| New Black Mixed | .03¾ | @ | .04½ |

## Bagging
(F. o. b. Phila.)

| | | | |
|---|---|---|---|
| Gunny, No. 1— | | | |
| Foreign | 1.50 | @ | 1.60 |
| Domestic | 1.75 | @ | — |
| Manila Rope | 3.50 | @ | 4.00 |
| Sisal Rope | 1.50 | @ | — |
| Mixed Rope | 1.10 | @ | 1.25 |
| Scrap Burlaps— | | | |
| No. 1 | 1.50 | @ | 1.60 |
| No. 2 | 1.10 | @ | 1.20 |
| Wool Tares, heavy | 3.00 | @ | — |
| Mixed Strings | 1.15 | @ | 1.25 |
| No. 1, New Light Burlap | 2.50 | @ | 2.75 |
| New Burlap Cuttings | 2.00 | @ | 2.25 |

## Old Papers
(F. o. b. Phila.)

| | | | |
|---|---|---|---|
| Shavings— | | | |
| No. 1 Hard White | 2.65 | @ | 2.75 |
| No. 2 Hard White | 2.30 | @ | 2.50 |
| No. 1 Soft White | 2.25 | @ | 2.50 |
| No. 2 Soft White | 1.40 | @ | 1.60 |
| No. 1 Mixed | .90 | @ | 1.00 |
| No. 2 Mixed | .60 | @ | .70 |
| Solid Ledger Stock | 1.55 | @ | 1.65 |
| Writing Paper | 1.05 | @ | 1.25 |
| No. 1 Books, heavy | 1.00 | @ | 1.15 |
| No. 2 Books, light | .90 | @ | .95 |
| No. 1 New Manila | 2.15 | @ | 2.30 |
| No. 1 Old Manila | 1.50 | @ | 1.60 |
| Print Manila | .50 | @ | .60 |
| Container Manila | .45 | @ | .50 |
| Old Kraft | 1.35 | @ | 1.40 |
| Common Paper | .25 | @ | .35 |
| No. 1 Mixed Paper | .25 | @ | .30 |
| Straw Board, Chip | .35 | @ | .40 |
| Binders Board, Chip | .35 | @ | .45 |
| Corrugated Board | .50 | @ | .60 |
| Overissue News | .45 | @ | .50 |
| Old Newspaper | .25 | @ | .30 |

## Domestic Rags (Old)

| | | | |
|---|---|---|---|
| White No. 1— | | | |
| Repacked | 4.25 | @ | 4.50 |
| Miscellaneous | 3.50 | @ | 3.75 |
| M. G. | 6.00 | @ | — |
| Thirds and Blues— | | | |
| Repacked | 2.00 | @ | 2.25 |
| Miscellaneous | 1.60 | @ | 1.80 |
| Black Stockings (Export) | 3.90 | @ | 4.25 |
| Roofing Stock— | | | |
| Foreign No. 1 | 1.25 | @ | 1.30 |
| Repacked | .80 | @ | .90 |
| No. 2 | .70 | @ | .75 |
| No. 3 (Roofing) | .30 | @ | .40 |
| No. 4 | .30 | @ | .40 |
| No. 5A | .70 | @ | .75 |
| B | .40 | @ | .60 |
| C | .25 | @ | .30 |

# BOSTON

## Paper
(F. o. b. Mill)

| | | | |
|---|---|---|---|
| Ledgers— | | | |
| Sulphite | .07½ | @ | .12½ |
| Rag content | .15 | @ | .30 |
| All rag | .38 | @ | .52½ |
| Bonds— | | | |
| Sulphite | .06½ | @ | .11½ |
| Rag content | .15 | @ | .30 |
| All rag | .36½ | @ | .65 |
| Writings | .06½ | @ | .20 |
| Superfines | .11 | @ | .31 |
| Book, Super | .06 | @ | .09 |
| Book, M. F. | .05½ | @ | .08½ |
| Book, Coated | .08½ | @ | .18 |
| Coated Litho | .09 | @ | .12 |
| Label | .09½ | @ | .15 |
| Jute Manila No. 1 | .11 | @ | .13 |
| Manila, Sul. No. 1 | .04¼ | @ | .06½ |
| Manila, Sul. No. 2 | .03¾ | @ | .04½ |
| No. 1 Kraft | .04¾ | @ | .06 |
| No. 2 Kraft | .03¾ | @ | .05 |

(Less car-freight to Boston)

| | | | |
|---|---|---|---|
| Southern Kraft | .03¾ | @ | .04¼ |

(F. o. b. destination in carload lots, f. o. b. mill in less than carload lots.)

| | | | |
|---|---|---|---|
| Common Bogus | .02 | @ | .02¾ |

Delivered New England points

| | | | |
|---|---|---|---|
| News Print Rolls | 61.50 | @ | — |
| Straw Boards, rolls | .009 | | 52.50 |
| Straw Board in Sheets, basis 35s to 70s | 54.50 | @ | 55.00 |
| Filled News Board | 32.50 | @ | — |
| Chip Board | 30.00 | @ | — |
| Chip Board (Special) | 32.50 | @ | — |
| Single Manila Lined Chip | 45.00 | @ | — |
| Single White, Patent Coated Newsboard Bender | 65.00 | @ | 80.00 |
| Wood Pulp Board | 75.00 | @ | 80.00 |
| Binder Boards | 70.00 | @ | 75.00 |

(F. o. b. Mill)

| | | | |
|---|---|---|---|
| Tarred Felts— | | | |
| Regular, carload lots | 65.00 | @ | — |

## Old Papers
(F. o. b. Boston)

| | | | |
|---|---|---|---|
| Shavings— | | | |
| No. 1 Hard White | 3.25 | @ | 3.75 |
| No. 2 Hard White | 2.60 | @ | 2.90 |
| No. 1 Soft White | 2.40 | @ | 2.50 |
| No. 1 Mixed | 1.10 | @ | 1.15 |
| No. 2 Mixed | .85 | @ | .90 |
| Solid Ledger Stock | — | @ | 2.25 |
| No. 1 Books, Heavy | 1.00 | @ | — |
| No. 1 Books, Light | .85 | @ | — |
| Crumpled Stitchless Book Stock | — | @ | .70 |
| Manila Env. Cuttings | 2.00 | @ | 2.25 |
| No. 1 Old Manila | — | @ | 1.00 |
| White Blank News | 1.50 | @ | 1.60 |
| Old Kraft | — | @ | 1.30 |
| Print Manila | .75 | @ | .80 |
| No. 1 Mixed Paper | — | @ | .18 |
| Overissue News | .35 | @ | .40 |
| Old Newspapers | .37½ | @ | .40 |
| Box Board, Chip | .50 | @ | .55 |
| Corrugated Boxes | .40 | @ | — |

## Bagging
(F. o. b. Boston)

| | | | |
|---|---|---|---|
| Gunny No. 1— | | | |
| Foreign | — | @ | 1.65 |
| Domestic | 1.60 | @ | — |
| Manila Rope— | | | |
| Foreign | 2.75 | @ | 3.00 |
| Domestic | — | @ | 3.50 |
| Transmission Rope | 2.50 | @ | — |
| Mixed Strings | — | @ | .90 |
| Jute Wool Strings | 1.00 | @ | — |
| Jute Carpet Threads | 1.00 | @ | 1.10 |
| Scrap Burlaps | 1.30 | @ | 1.35 |
| Scrap Sisal | — | @ | 1.50 |
| Scrap Sisal for shredding | — | @ | 1.75 |
| Wool Tares, heavy | — | @ | 1.40 |
| New Burlap Cutting | 1.75 | @ | 2.00 |
| Australian Pouches | — | @ | 2.50 |
| Heavy Baling Bagging | 2.00 | @ | 2.10 |
| Bleachery Burlap | — | @ | 3.50 |

## Domestic Rags (New)
(F. o. b. Boston)

| | | | |
|---|---|---|---|
| Shirt Cuttings— | | | |
| New White No. 1 | .07½ | @ | .08 |
| New White No. 2 | — | @ | .06 |
| Silesias No. 1 | .06 | @ | .06½ |
| New Unbleached | — | @ | .09½ |
| Fancy | .04 | @ | .04½ |
| Washable | .04 | @ | .04½ |
| Cottons—According to grades | | | |
| Blue Overalls | .06¼ | @ | .06¾ |
| New Black, soft | .04 | @ | .04¼ |
| Khaki Cuttings | .04 | @ | .04½ |
| O. D. Khaki | .04½ | @ | .05 |
| Corduroy | .03 | @ | .03½ |
| New Canvas | .08 | @ | .08¼ |

## Domestic Rags (Old)
(F. o. b. Boston)

| | | | |
|---|---|---|---|
| Canvas | .04½ | @ | — |
| White No. 1— | | | |
| Repacked | 4.75 | @ | 5.25 |
| Miscellaneous | 5.00 | @ | — |
| White No. 2— | | | |
| Repacked | .04½ | @ | .05 |
| Miscellaneous | .03¾ | @ | .04 |
| Twos and Blues | 2.75 | @ | 3.00 |
| Thirds and Blues— | | | |
| Repacked | 2.25 | @ | 2.50 |
| Miscellaneous | 1.75 | @ | 1.90 |
| Black Stockings | 3.65 | @ | 4.00 |
| Roofing Stock— | | | |
| No. 1 | 1.25 | @ | 1.50 |
| No. 2 | .90 | @ | 1.00 |
| No. 3 | .85 | @ | .90 |
| No. 4 | .75 | @ | .85 |

## Foreign Rags
(F. o. b. Boston)

| | | | |
|---|---|---|---|
| Dark Cottons | — | @ | .85 |
| New No. 1 Shirt Cuttings | 8.00 | @ | 8.50 |
| Dutch Blues | — | @ | 2.00 |
| Lace Curtains | 4.00 | @ | 4.25 |
| New Checks & Blues | 4.25 | @ | 4.60 |
| Old Fustians | 1.65 | @ | 1.75 |
| Old Linsey Garments | 1.00 | @ | 1.10 |

# TORONTO

## Paper
(F. o. b. Mill)

| | | | |
|---|---|---|---|
| Bond— | | | |
| No. 1 Sulphite | .12½ | @ | — |
| No. 2 Sulphite | .09¾ | @ | — |
| No. 1 Colored | .13½ | @ | — |
| No. 2 Colored | .09½ | @ | .10½ |
| Ledgers (sulphite) | — | @ | — |
| Ledgers, No. 1 | .16 | @ | — |
| Ledgers, No. 2 | .27 | @ | — |
| Writing | .09½ | @ | .10 |
| Book— | | | |
| No. 1 M. F. (carloads) | 7.50 | @ | — |
| No. 2 M. F. (carloads) | 7.25 | @ | — |
| No. 3 M. F. (carloads) | 4.00 | @ | 5.75 |
| No. 1 S. C. (carloads) | 8.00 | @ | — |
| No. 2 S. C. (carloads) | 7.75 | @ | — |
| No. 3 S. C. (carloads) | 7.50 | @ | — |
| No. 4 S. C. (carloads) | 6.25 | @ | — |
| No. 1 Coated and Litho | 13.25 | @ | — |
| No. 2 Coated and Litho | 12.25 | @ | — |
| No. 3 Coated and Litho | 10.00 | @ | 11.50 |
| Coated tinted | 14.50 | @ | — |
| Wrapping— | | | |

(Delivery Points)

| | | | |
|---|---|---|---|
| Rag Brown | 4.95 | @ | — |
| White Wrap | 5.25 | @ | — |
| "B" Manila | 5.00 | @ | — |
| No. 1 Manila | 5.40 | @ | — |
| Fiber | 5.40 | @ | — |
| Kraft, M. F. | 5.90 | @ | — |
| Kraft No. 2 | 5.40 | @ | — |

(Delivered Toronto)

| | | | |
|---|---|---|---|
| News, per ton— | | | |
| Rolls (contract) | 61.50 | @ | 62.00 |
| Sheets | 67.00 | @ | — |

## Pulp
(F. o. b. Mill)

| | | | |
|---|---|---|---|
| Ground Wood | 30.00 | @ | 32.00 |
| Sulphite easy bleaching | 50.00 | @ | — |
| Sulphite, news grade | 70.00 | @ | — |
| Sulphite, bleached | 72.50 | @ | 75.00 |
| Sulphate | 60.00 | @ | — |

## Old Waste Paper
(In carload lots, f. o. b. Toronto)

| | | | |
|---|---|---|---|
| Shavings— | | | |
| White Env. Cut | 2.80 | @ | — |
| Soft White Book Shavings | 2.60 | @ | — |
| White Blk. News | 1.50 | @ | — |
| Book and Ledger— | | | |
| Flat Magazine and Book Stock (old) | 1.10 | @ | — |
| Light and Crumpled Book Stock | 1.20 | @ | — |
| Ledgers and Writ- | | | |
| Manilas— | | | |
| New Manila Cut | 1.50 | @ | — |
| Printed Manilas | .80 | @ | — |
| Kraft | 1.90 | @ | — |
| News and Scrap— | | | |
| Strictly Overissue | .70 | @ | — |
| Strictly Folded | .70 | @ | — |
| No. 1 Mixed Paper | .60 | @ | — |

## Domestic Rags
(Price to mills, f. o. b. Toronto)

| | | | |
|---|---|---|---|
| No. 1 White Shirt Cuttings | .09½ | @ | .10 |
| Fancy Shirt Cuttings | .06 | @ | .06¼ |

Advertising matter paged consecutively with text, has been removed here to lessen the bulk of this volume.